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JVC

4719

SERVICE MANUAL

MODEL

KD-35A/B/C/E/J/U

STEREO CASSETTE DECK

No. 4152
March 1977

1V 4152

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Specifications

Type	:	Stereo cassette deck
Track system	:	4-track, 2-channel
Cassettes	:	C-30, C-60, C-90
Frequency response	:	
Chrome *1		20–16,000Hz (Nominal) 30–15,000Hz (Typical)
Normal *2		20–16,000Hz (Nomical) 40–15,000Hz (Typical)
		Surpasses DIN 45500
S/N ratio	:	56 dB (from peak level, weighted) The S/N is improved by 5dB at 1kHz and by 10dB above 5 kHz with Dolby NR on 60dB with Dolby NR on (DIN45500 weighted)
Wow and flutter	:	0.09% (WRMS) 0.20% (DIN 45511)
Crosstalk	:	65dB
Harmonic distortion	:	1.3% (normal tape)
Bias	:	AC bias (95kHz)
Erasure	:	AC erasure
Heads	:	2 heads Sen-Alloy head for recording /playback and Double gap ferrite head for erasure
Motor	:	Electronically governed DC motor (12 V)
Tape speed	:	4.8cm/sec.
Recording time	:	2 x 30 minutes with C-60 cassette
Fast forward time	:	125 sec., with C-60 cassette
Rewind time	:	125 sec., with C-60 cassette
Semiconductors	:	5 ICs, 26 transistors, 2 SCRs and 38 diodes
Input jacks	:	Mic jack x 2 Max. sensitivity 0.2mV matching impedance 600Ω – 10kΩ Input jack x 2 Min. input level 80mV Input impedance 100kΩ
Output jacks	:	Output jack x 2 Output level 0–0.35 V Output impedance 0–3 kΩ Matching load impedance 50kΩ or more Headphone jack x 1 Output level 0.3mW Matching impedance 8Ω – 1kΩ
DIN connector (REC/PB)	:	Min. input level 0.12mV/kΩ Input impedance 10kΩ Output level 0–0.35V Output impedance 0–3 kΩ, Matching impedance 50kΩ or more
Power requirement	:	AC 120 V, 60 Hz (KD35J/C) AC 120V, 220V, 240V, 50/60Hz (KD-35E/A/B) AC 100V,120V,200V,220V 50/60Hz (KD-35U)
Power consumption	:	30W
Dimensions	:	Width; 15-3/8" (390 mm) Height; 6" (151mm) Depth; 12-7/8" (326mm)
Weight	:	14.8 lbs. (6.7 kg)

*1 TDK SA or Equivalent tape
*2 MAXELL UD or Equivalent tape

Design and specifications are subject to change without notice.

Features

"Vertical-open-view" cassette deck
Multi-point peak level indicators
ID (Independent Drive) mechanism
Full auto stop
Dolby Noise Reduction System used I.C.
Air-damped cassette door (Pat. pending)
Input select switch
Tape select switches
Output level control
Timer recording

Controls and Connections

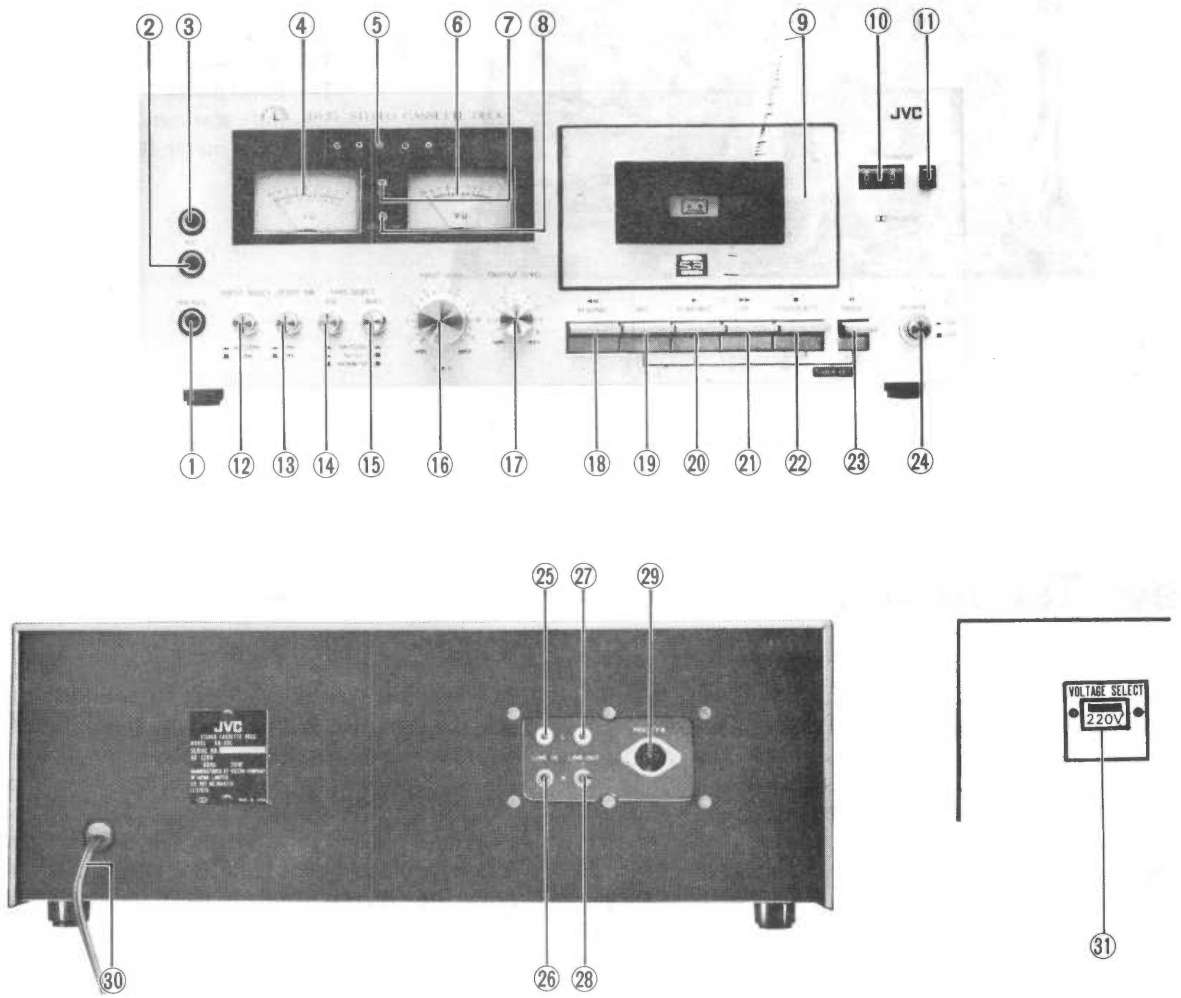


Fig. 2

1 Headphone jack (PHONES)
2 Right channel microphone jack (MIC-R)
3 Left channel microphone jack (MIC-L)
4 Left channel level meter
5 PEAK level indicators
6 Right channel level meter
7 REC indicator
8 Dolby NR indicator
9 Cassette door
10 Tape COUNTER
11 Counter reset button
12 INPUT SELECT switch
13 Dolby NR switch
14 TAPE SELECT EQ switch
15 TAPE SELECT BIAS switch
16 REC-LEVEL controls
17 OUTPUT-LEVEL control
18 Rewind button (REW)
19 Record button (REC)
20 Play button (PLAY/REC)
21 Fast forward button (FF)
22 STOP/Eject button (STOP/EJECT)
23 Pause button (PAUSE)
24 POWER switch
25 Left channel LINE IN terminal
26 Right channel LINE IN terminal
27 Left channel LINE OUT terminal
28 Right channel LINE OUT terminal
29 DIN socket (REC/PB)
30 Power cord
31 Voltage selector (KD-35A/B/E)

Main Parts Location

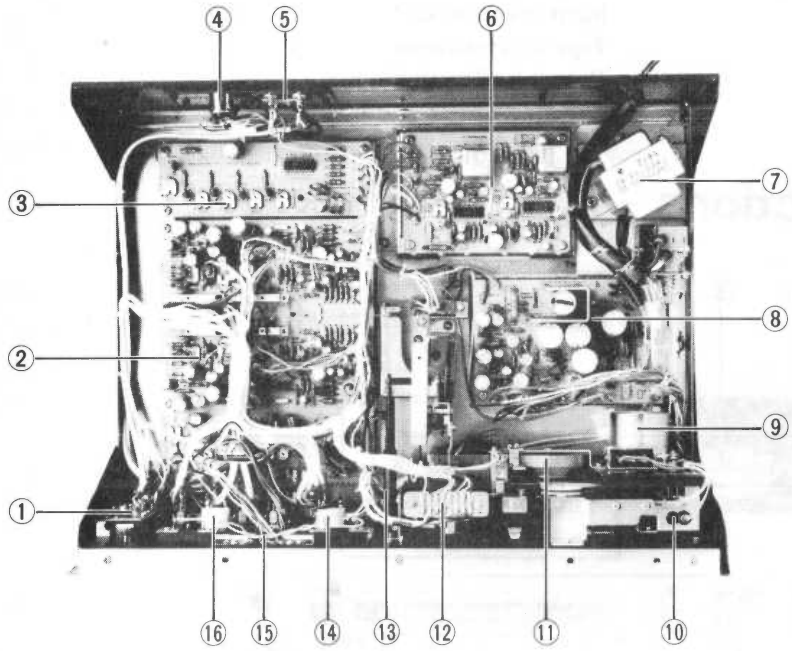


Fig. 3

1 MIC jack circuit board
2 Main amp circuit board
3 Peak level circuit board
4 DIN jack
5 PIN jacks
6 DOLBY NR circuit board
7 Power transformer
8 Power supply circuit board
9 Motor ass'y
10 Cds lamp
11 Flywheel ass'y
12 Head wire terminal circuit board
13 Air-damp pipe
14 Level meter (Right)
15 Indicator circuit board
16 Level meter (Left)

New Technique

The multi-point peak level indicators let you know the precise levels of the peak signal pulses that the mechanical VU meters cannot follow. They are essential aids for making good recordings, for they allow recording at maximum levels without exceeding the magnetic saturation level of the tape. During adjustment, sine waves are used and the indication of the VU meters corresponds to that of the peak level indicators. But, for ordinary musical signals, the VU meters usually indicate lower values because of their slower response.

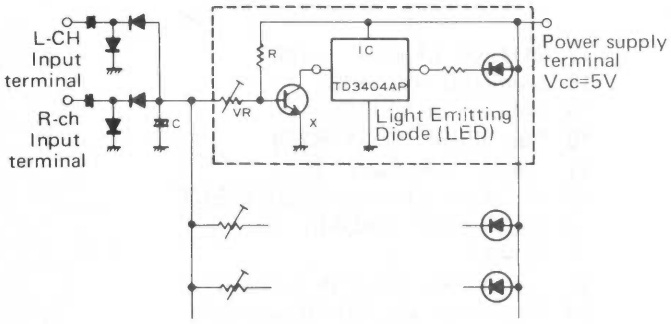


Fig. 4

The left and right channel inputs are individually rectified and the capacitor C is charged by the higher of the left and right channel signal levels. The variable resistor VR adjusts the lighting level of the LED. When no input signal is available, the transistor X is conducting because base current is applied through the resistance. At this time the output terminal of the IC TD3404AP is at a high level (5V), providing no current to the LED, which does not light up. When the base potential of the transistor X is reduced to below 0.6V by the input signal, X becomes non-conducting, the IC output is at a low level (0V) and current flows to the LED and lights it up.

The multi-point peak level indicators consist of five of the circuits encircled by the broken line, connected in parallel. Each of the VRs is adjusted according to the signal level at which the LED lights up to indicate.

A circuit which, with high level inputs, provides low level outputs and vice versa, such as TD3404AP, is usually called an inverter. This IC TD3404AP, widely used in computers, is a digital IC which includes six such inverter circuits, five of which are used in this set.

For easy use, the peak level indicator circuit of this set is so designed that the higher one of the right and left channel signal levels is detected to light the LED. The attack time is established at about 4msec, achieving both easy visibility and indication accuracy.

For adjustment, see the section "ADJUSTMENTS" on page 10.

Maintenance

To get long, trouble-free service, maintenance is important. Do not forget cleaning and demagnetizing.

Cleaning

After long use, the heads and tape part – capstan, pinch roller, etc. – will become dirty with dust or magnetic particles. Dirty heads cause imperfect erasing or drop-off of high frequency. A dirty capstan and pinch roller will cause unstable tape speed, leading to increased wow and flutter. flutter.
Always keep them clean by the following procedure below.

1. Heads

1) Press the EJECT button with the POWER switch OFF to open the cassette door.
2) Remove the cassette door by sliding it upward.

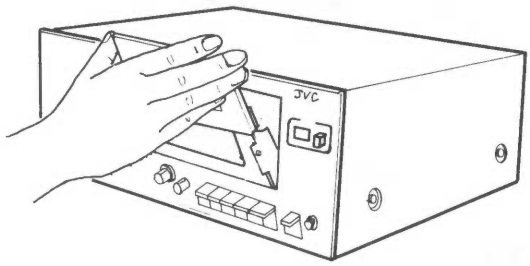


Fig. 5

3) Press the PLAY button to move the heads out.
4) Use the head cleaning stick provided to wipe the surface where the tape comes into contact with the head.
(It is effective to moisten the cotton with alcohol.)

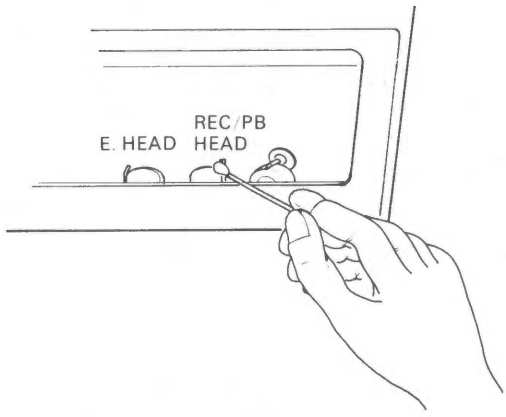


Fig. 6

2. Pinch roller and capstan

1) Press the EJECT button with the POWER switch ON to open the cassette door.
2) Press the PLAY button, and the pinch roller will move out and rotate.
3) Apply a soft cloth (soaked in alcohol, it will be more effective) to the rotating pinch roller and capstan.
Be careful not to let the cloth get caught!
* Do not use any cleaner besides alcohol or a specifically prepared tape head cleaning solution.

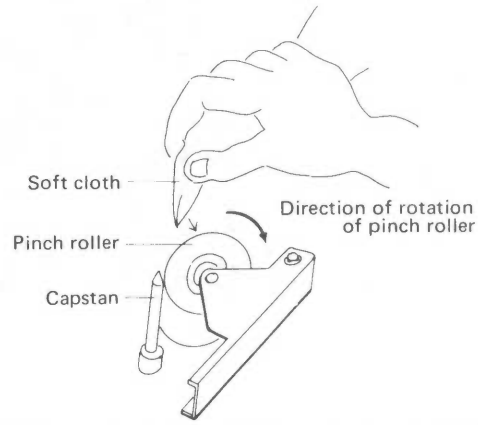


Fig. 7

3. Cabinet

When the cabinet becomes dirty, wipe it with a soft cloth soaked with a neutral cleaning solution of a polishing cloth.
* Do not use thinner or benzine.

Demagnetizing

The heads are made from a material resistant to magnetization, but after long use they may become magnetized. A magnet brought into their vicinity can magnetize the heads, causing excess noise. If noise seems to have increased, demagnetize the REC/PB head with a head demagnetizer through the following procedure.

1. Turn the POWER switch OFF.
2. Wrap the tip of the demagnetizer with vinyl tape or soft cloth so as not to damage the head surface. Switch on the demagnetizer and bring it close to the head.
3. Move the tip of the demagnetizer slowly first to the left and right, then up and down in front of the head.
Gradually move it away from the head and switch it off at a distance of more than 30cm. (12")
4. The erase head need not be demagnetized. The capstan shaft and tape guide should be demagnetized in the same way as the record/playback head.
* Do not bring a magnetized metallic object (a screwdriver, for example) near the head as this will increase noise.

Main Parts Removing

This cassette deck which features a compact design and high performance uses minuature-sized parts which are closely arranged. Use special care when servicing it.

Enclosure Assembly

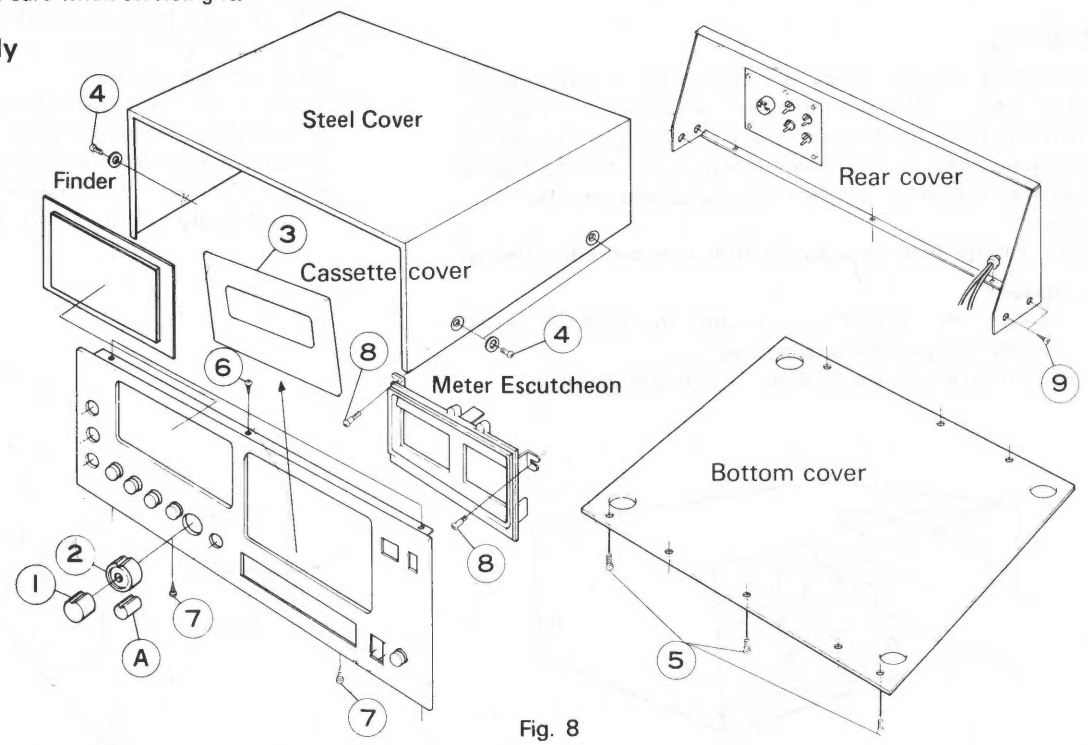


Fig. 8

Parts Name	Procedure	Ref. No.	Remarks
REC LEVEL and OUTPUT LEVEL control knobs	1. Pull off the inner knob and the outer ring to front side. 2. Pull off the output level knob.	① ② Ⓐ	Inner knob – for left channel Outer ring – for right channel
Cassette door	1. Press the EJECT button to open the cassette door. 2. Remove the cassette door by sliding it upward.	③	• When the cassette door be removed, can easy clean or demagnetize the head. • When replace the cassette door, insert it that ball bearings be full locked.
Steel cover	Remove 2 screws and washers of both sides (L & R).	④	Almost all parts of circuit board can be checked when only steel cover is removed.
Bottom cover	Remove 6 screws fastening the bottom cover.	⑤	• 3ϕ 8mm screws • Almost all pattern side of circuit board can be checked when only bottom cover is removed.
Front panel	1. Remove 3 tapping screws fastening up side of the F. panel. 2. Remove 3 screws fastening the bottom cover. 3. Remove 2 tapping screws fastening under side of the F. panel.	⑥ ⑦	Remove the front panel after removing the steel cover and bottom cover.
Meter escutcheon	Remove 2 screws (L and R side of upward) fastening the meter escution.	⑧	Remove meter escution after removing the front panel.
Rear cover	1. Remove 3 screws fastening the bottom cover. 2. Remove 2 screws (L and R side of under side) fastening the rear cover.	⑨	

Electrical Parts

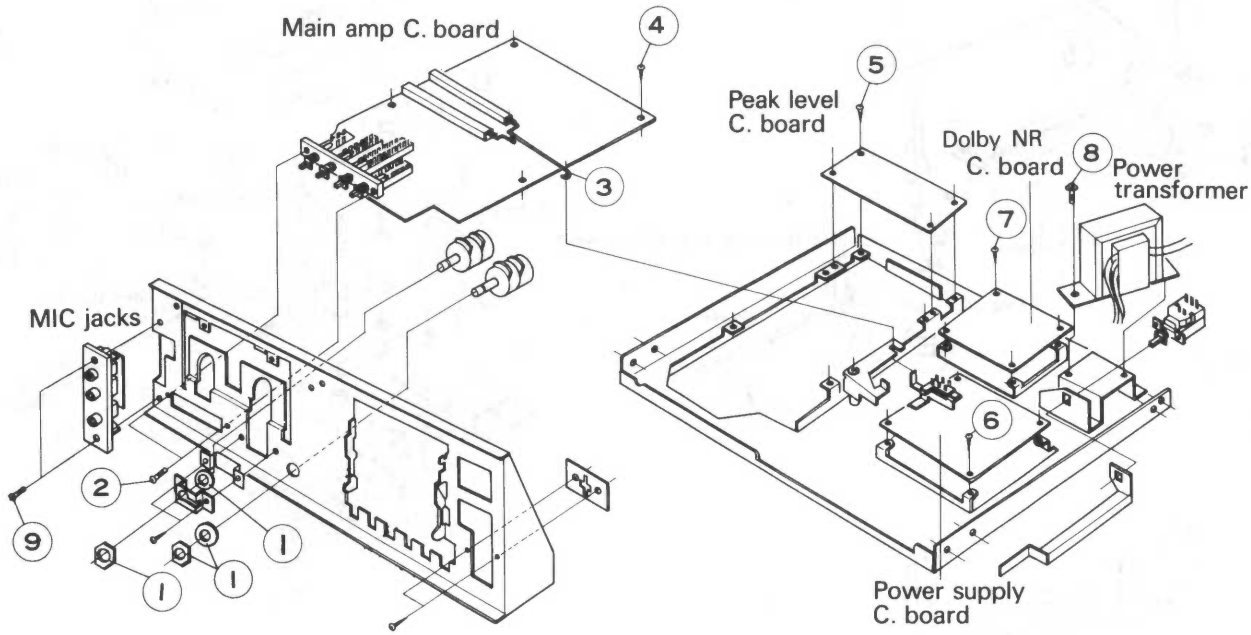


Fig. 9

Parts Name	Procedure	Ref. No.	Remarks
Main amp circuit board	1. Remove 2 screws fastening the switch ass'y. 2. Remove rod of the recording lever. 3. Remove 4 tapping screws fastening the main amp circuit board.	② ③ ④	Remove the main amp circuit board after removing the front panel.
REC volume and Output level	Remove washers and nuts of the V. Resistors shaft fastening the front bracket.	①	Remove the V. Resistor after removing the front panel.
Peak level C. board	Remove 4 tapping screws fastening the peak level C. board.	⑤	
Power supply C. board	Remove 4 tapping screws fastening the power supply C. board.	⑥	
DOLBY N R C. board	Remove 4 tapping screws fastening the DOLBY N R C. board.	⑦	
Power transformer	Remove 2 screws and washers fastening the power transformer.	⑧	
MIC jack ass'y	Remove 2 screws fastening the MIC jack ass'y.		The left side of front bracket.

Mechanical Parts

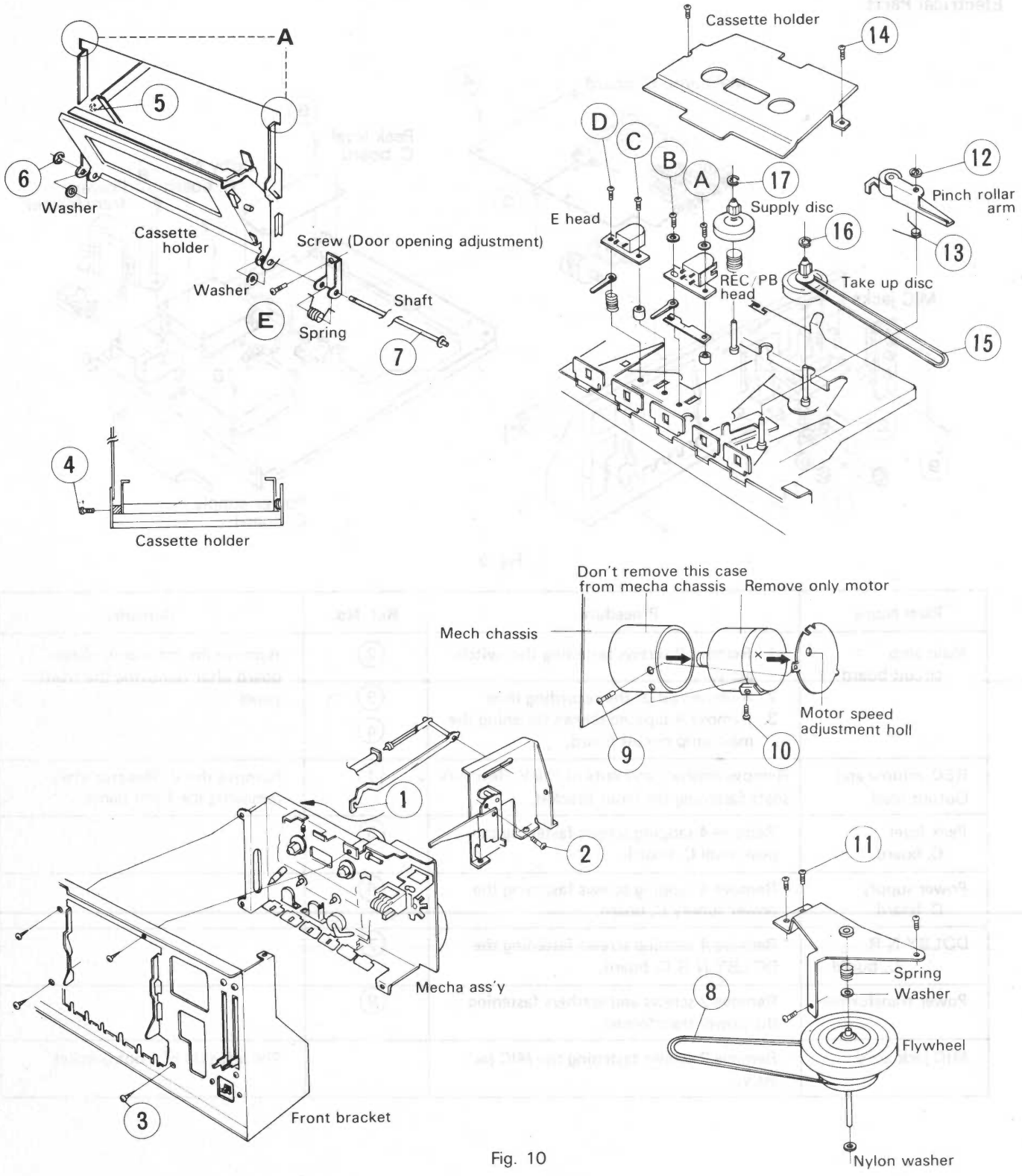


Fig. 10

Parts Name	Procedure	Ref. No.	Remarks
Mecha-ass'y	1. Press the EJECT button, then the cassette door be loaded Remove the brake arm ① from stud of cassette holder. 2. Remove a screw ② fastening the recording arm. 3. Remove 4 screws fastening the front bracket. 4. Pull off the mecha-ass'y to back side.	① ② ③	When the brake arm remove, be carful not to stain the "O" ring and don't less grease.
Cassette holder	1. Remove a screw fastening the cassette holder. 2. Remove "E" ring holding the shaft. 3. Pull off the shaft to right side. 4. Remove the cassette holder by sliding it upward on A position of panel bracket.	④ ⑥ ⑦	When replace the cassette holder, don't forget spring and 2 washers of the shaft.
Motor	Don't remove the motor case from mecha chassis and remove the motor only, you can be easy replaced it. 1. Remove the take up belt. 2. Remove the capstan belt. 3. Disconnect 2 wires of motor. 4. Remove a screw fastening the bottom plate of motor. 5. Remove a screw fastening the transistor. 6. Press the motor from upward (pully side), then can be removed the motor.	⑧ ⑨ ⑩	Be carful not to stain the belt.
Flywheel	1. Remove 2 screws fastening the muting SW bracket. 2. Remove the capstan belt. 3. Remove 4 screws fastening the flywheel holder. 4. Pull off the flywheel.	⑪	Be careful not to stain the belt. When replace the flywheel, don't forget to insert a nylon washer to its shaft.(as same spring and washer)
Pinch roller arm ass'y	1. Remove "E" ring holding the pinch roller arm ass'y. 2. Remove spring on the arm ass'y.	⑫ ⑬	
Take up disc	1. Remove 2 screws fastening the cassette holder. 2. Remove the counter belt. 3. Remove "E" ring holding the take up disc. 4. Pull off the disc from the shaft.	⑭ ⑮ ⑯	
Supply disc	1. Remove the cassette holder. 2. Remove "E" ring holding the supply disc. 3. Pull off the disc from the shaft.	⑭ ⑰	

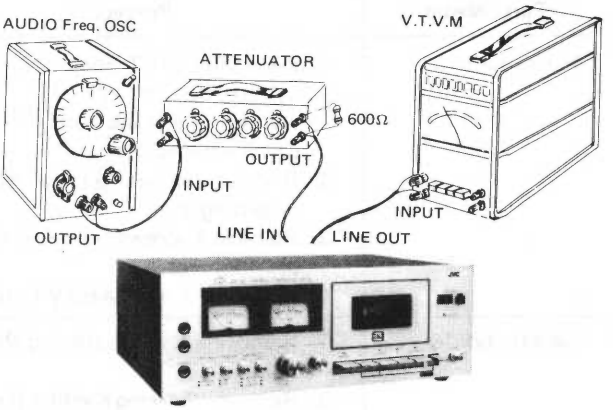
NOTE: 1. Don't dirty, slippery and undue run-out the capstan belt and counter belt.
2. Adjust height of the motor pulley, when the capstan belt connect to the flywheel from the motor, pulley, so that it will be parallel to the chassis.

Adjustments

Electrical Adjustment

Equipment and measuring instruments used for adjustment.

1. V.T.V.M. (measuring AC in millivolt)
2. Audio-frequency oscillator
   (range: 50–20kHz and output 0dB with impedance 600Ω)
3. Attenuator
4. Reference tapes for REC/PB
   Maxell UD – normal tape
   TDK SA – chrome tape
5. Reference tapes for playback
   VTT-664 (1kHz 16mM)
   VTT-666 (400Hz 22mM)
6. Resistors
   100Ω (for measurement of the bias current)
   600Ω (for attenuator matching)



KD-35

Fig. 11

No.	Item	Procedure	Part	Rating	Remarks
1.	Level meter deflection	1. Set the deck in the record mode, and set INPUT SELECT switch at LINE IN. 2. Input 1kHz signals (about 10dBs) from LINE IN jacks and adjust volume control so that test points [12] and [62] are –5.5 dBs. 3. Adjust semi-fixed resistors VR103 and 203 in this condition it obtain zero VU meter reading.	(Main amp C. board TAA305204) VR103,203		The angle of meter deflection has been factory-adjusted, but should be adjusted when parts are replaced. When adjust the level meter, don't use a headphone.
2.	Peak level	1. Set as same mode at step(1) and adjust semi-fixed resistor VR703 so that the "0" indicator is lighting and no lighting at –1dB from step(1) with attenuator. 2. Adjust semi-fixed resistor VR704 so that the "–5" indicator is lighting at –5dB from step(1) with attenuator. 3. Adjust semi-fixed resistor VR705 so that the "–10" indicator is lighting at –10dB from step(1) with attenuator and no lighting at –11dB from step(1) with attenuator. 4. Adjust semi-fixed resistor VR702 so that the "+3" indicator is lighting at +3dB from step(1) and no lighting at +2dB from step(1) with attenuator. 5. Adjust semi-fixed resistor VR701 so that the "+6" indicator is lighting at +5dB from step(1) with attenuator.	(Peak level C. board TAA305306) VR703 VR704 VR705 VR702 VR701		
3.	Playback sensitivity	1. Set equalizer switch at normal and playback reference tape VTT-664. Adjust semi-fixed resistors VR101(L) and VR201(R) so that test points [12] and [62] are –5.5 dBs. then level meters indicate zero VU (about 0.36V at LINE OUT when output level control is maximum.) 2. Playback reference tape VTT-666 and check that the VU meter indicate CAL.	(Main amp C. board VR101,201	–5.5 dBs zone of CAL mark	1. Adjust playback sensitivity when heads are replaced. 2. Make this adjustment after making sure level meter deflection angle is correct.

No.	Item	Procedure	Part	Rating	Remarks
4.	Bias current	1. Insert a 100Ω resistor into the ground side wiring of the head and connect the V.T.V.M. across the resistor, and set the BIAS SW at chrome or normal. Set the deck in record mode. Input signals to LINE IN jacks and adjust the recording level control so that the test points [12] and [62] are −15.5 dBs. First adjust for chrome tape, then for normal tape. 2. After the deck correct the head wires, input the standard level of 1kHz signals to use reference tape, and measure REC/PB frequency response at 10kHz. 3. Adjust semi-fixed resistors VR502,504 (chrome) 501, 503(normal) so that the 10kHz frequency response does become ±1 dB. Repeat the recording and playback so that 10kHz signals become correct frequency response. Level over at 10kHz compared with 1kHz — bias current less Level less at 10kHz compared with 1kHz — bias current over	chrome VR502,504 normal VR501,503	chrome 45 mV normal 30 mV	1. Adjust bias current when heads or other parts are replaced. 2. Use the highclass V.T.V.M. for high frequency response. 3. After the bias current adjustment, check the frequency response at 10kHz signals.
5.	Recording signal current	1. Set the deck in the record mode. 2. Input the 1kHz signals to LINE IN jacks and adjust the recording level control so that the test points [12] and [62] are −15.5 dBs. make recording in such a way. 3. Adjust the semi-fixed resistors VR104, 204(chrome), VR105,205(normal) so that the test points are −15.5dBs.	(Main amp C. board) chrome VR104,204 normal VR105,205		1. This adjustment is necessary when heads are replaced. 2. Make this adjustment after adjusting steps (1) through (4). 3. Check the frequency response at 10kHz after this adjustment. 4. Set EQ and BIAS switches according to type of tape used.
6.	Dolby NR circuit	1. Disconnect +B of bias circuit so that oscillator does not operate. (Desolder the BIAS CUT in main amp circuit board) 2. Set the deck in the record mode. 3. Apply signal of 1kHz to LINE IN and adjust volume control so that test points [12] and [62] (in main amp circuit board) are −2.5 dBs. 4. Then, connect the V.T.V.M. to test points [W3] [W5] in main amp circuit board and adjust the semifixed Resistor (VR301, 401) so that the test point [W3] [W5] are −2.5 dBs. 5. Check the test point ⓗ Ⓗ output to be −25 dBs ± 2 dB attenuated 30 dB. at 1.4 kHz signal and output to be −24.3 dBs ± 2 dBs attenuated 30 dBs at 5 kHz signal. Dolby NR SW off to on. 1.4 kHz + 7.5 dB up. 5 kHz + 8.7 dB up. 6. Playback reference tape VTT-664 and check LINE OUT level so that it's compare are ±1dB less with Dolby NR on to off. 7. Connect +B of bias circuit (Solder the printed in main amp circuit board for connect +B).			1. See figure of Dolby NR circuit.

Troubleshooting Guide

Mechanical Adjustment

1. Replacement and adjustment of the head

(See Ⓐ Ⓑ Ⓒ Ⓓ in Fig. 10 of page 8)

If either of the record/playback head and the erase head shown low performance because of wear, broken wire or excessive magnetization, it should be replaced.

Part	Screws to be removed
REC/PB head E head	Ⓐ, Ⓑ Ⓒ, Ⓓ

REC/PB head

After replacement, adjust the head for azimuth.

1. Insert the cord plug into the LINE OUT jack (or REC/PB), and connect the other end of the cord to a V.T.V.M. (vacuum tube voltmeter).
2. Play the azimuth adjustment test tape (e.g. JVC's VTT-653, 10kHz).
3. Turn the azimuth screw Ⓑ so that the output will become maximum.
   If the azimuth adjustment test tape is not available, play a music cassette.
   When treble response becomes optimum, set the adjustment screw Ⓑ.
4. After this adjustment, the screw Ⓑ should be locked with a bond.

If necessary, adjust playback sensitivity, REC bias current, REC signal current and bias trap.

Erasing head

After replacement, adjust the head for height position.

1. Play the test tape (C-120).
2. Turn the adjustment screw Ⓓ so that the test tape move running to no touch the tape guide tip (up or low side).

If checking is difficult, cut front upper side of the cassette of C-120 by a cutter knife, etc., then can easy check it.

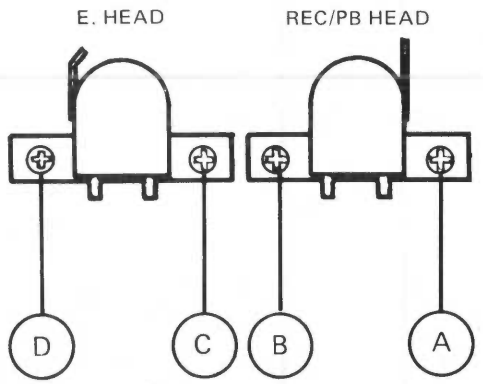


Fig. 12

2. Adjusting the motor speed

1) Play back reference tape (3000Hz), and adjust the semi-VR in the motor that it's speed in 3000Hz±2% (2970Hz~3060Hz).
2) KD-35 need not to change cycle, whether the commercial frequency in your area is 50 or 60Hz.

[ELECTRICAL CIRCUIT]

1. Playback tone quality is poor.

1. Check the record/playback head for dust.
2. Check the record/playback head for wear.
   If worn excessively, the loss of treble response will result.
3. Check wiring for a short-circuit.
   Check each transistor for condition.

2. Recording tone quality is poor.

The playback tone quality of a recorded tape such as the audition tape is good, but the recording by this unit produces poor tone quality. In this case, the unit should be checked in the following manner.

1. By monitoring a music while recording, check the tone quality.
2. If found poor, check the wiring of the recording system for a broken wire and short-circuit.
3. If no irregularity is found, check the recording bias current. Also check the oscillation circuit.

3. For other failures, check the unit in the same manner as other amplifiers.

3. Standard torque

Fast forward torque	70 gr-cm or more
Rewinding torque	70 gr-cm or more
Take-up torque	35~70 gr-cm

4. Door opening speed adjustment

(See Ⓔ in Fig. 10 of page 8)

Door opening is opened slowly by screw E is loosened and move the bracket position to back side. (The spring tension varies strong)

[MECHANISM SECTION] (wow and flutter)

If wow and flutter increase, check the following points.
If there is defect in revolving parts, the wow and flutter generated will increase in proportion to the number of revolutions.

Play a 3000Hz test tape, and defective part can be detected from the sound.

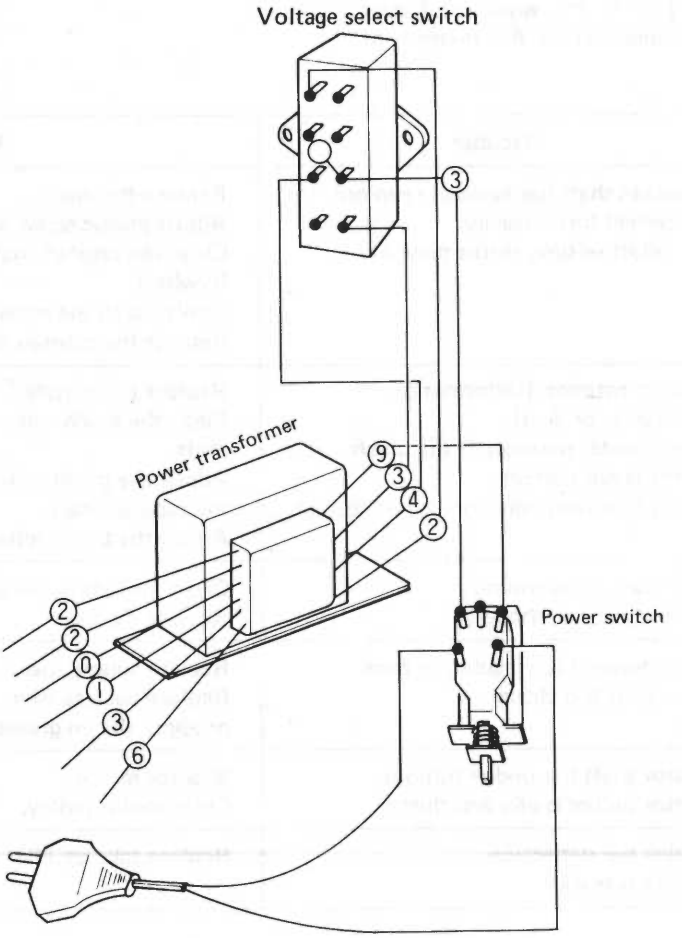
Section	Trouble	Repair
Capstan and flywheel	Capstan shaft has excessive run-out. Flywheel turns heavily. (shaft seisure, thrust play, etc.)	Replace flywheel. Adjust plastic screw with flywheel holder. Clean the capstan shaft and the groove in the flywheel. Apply oil to the metal position. Replace the capstan assembly.
Pinch roller	Rough rotation (Deformation scratches, or dust). The angular position of the pinch roller is not correct. The pinch roller pressure is not correct.	Replace pinch roller. Clean the pinch roller or apply oil to the rotary shaft. Adjust the pinch roller so that it is parallel with the capstan shaft. Adjust the pinch roller spring.
Belt	Belt has undue run-out. Belt is dirty or slippery.	Clean the belt or remove the distortion. Replace the belt.
Back tension	Back tension is irregular, or back tension is too strong.	Replace supply disc. Replace back tension spring (under supply disc), or apply silicon grease.
Motor	Motor shaft has undue run-out. Motor pulley is oily and dusty.	Replace motor. Clean motor pulley.
Take-up idler arm	Pulley has deflection. Pulley is stuck.	Replace take-up idler arm.

[MECHANICAL REPAIRS]

Section	Trouble	Repair
Take-up idler arm	Standard take-up torque not available.	Replace take-up idler arm. Replace take-up idler arm pressure spring. Clean or replace capstan belt. Clean rubber rim of the right reel.
Reel disc and idler	Fast-forward torque not available.	Clean rubber rim of the right reel or replace reel disc assembly. Clean or replace fast-forward idler. Clean rubber rim of the left reel or repalce reel disc assembly. Clean rewind idler tire.
Door brake	Door does not open fully. Braking not sufficient.	Apply a small quantity of silicon grease to the inside surface of the brake pipe. (SHIN ETSU KAGAKU KS-64 or equivalent) Replace brake pipe or rubber O-ring.
Auto-stop mechanism	Auto-stop not operating.	Check slide lever and solenoid iron core for smooth movement. Check if the locking and sliding parts of the operation button cam are well coated with molybdenum.

Wiring

KD-35A/B/E



KD-35U

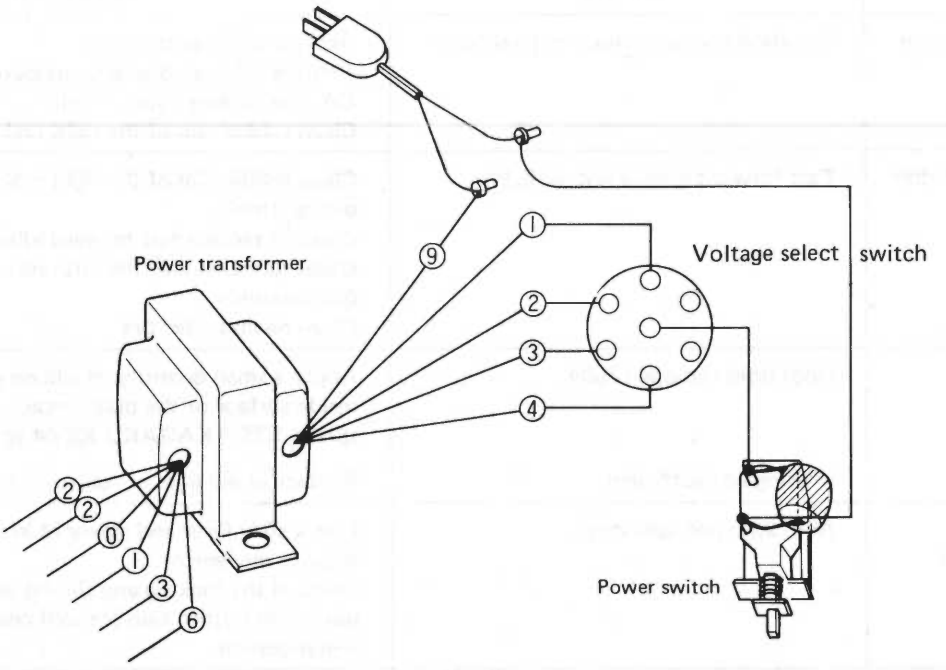
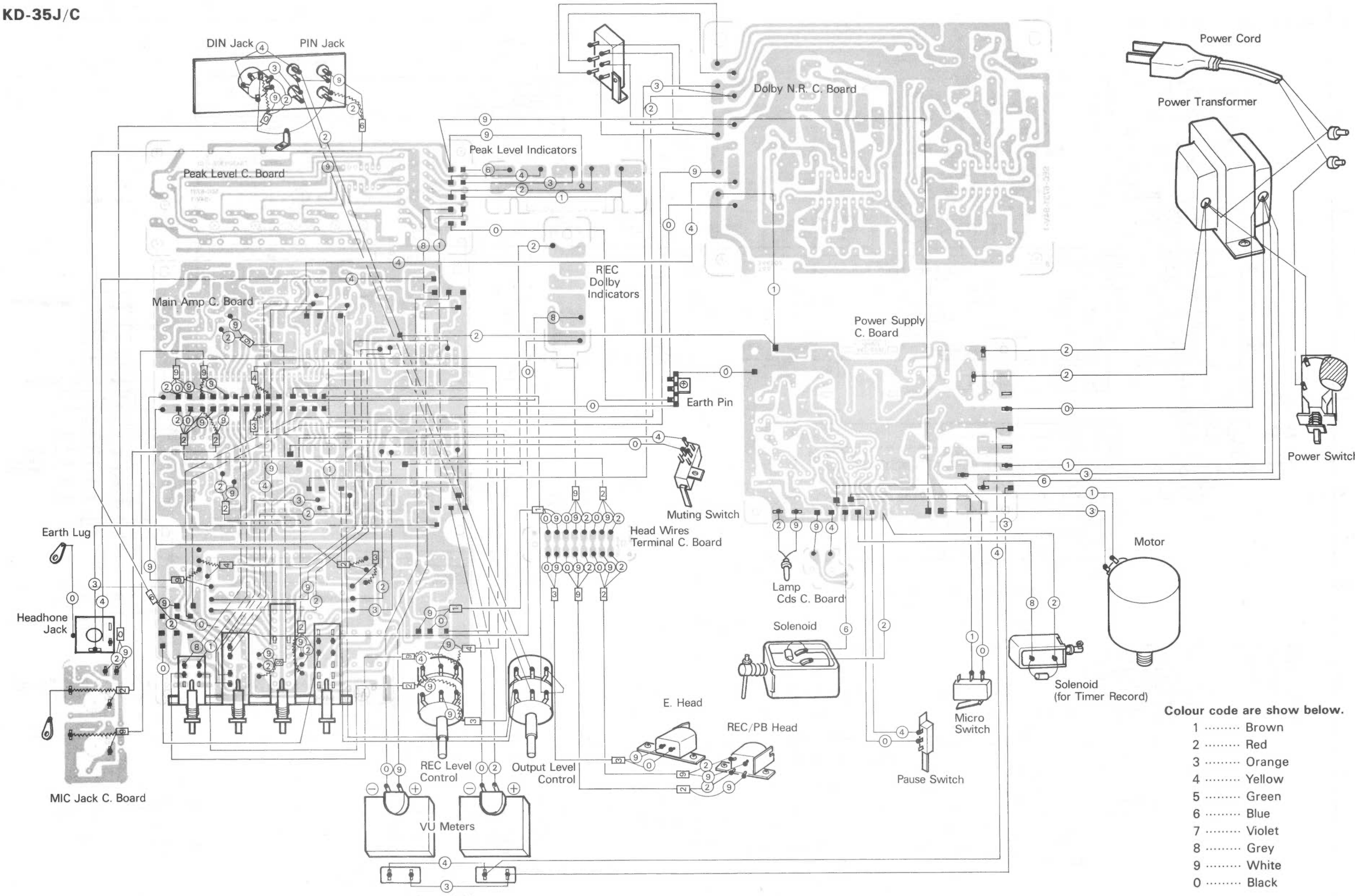


Fig. 13

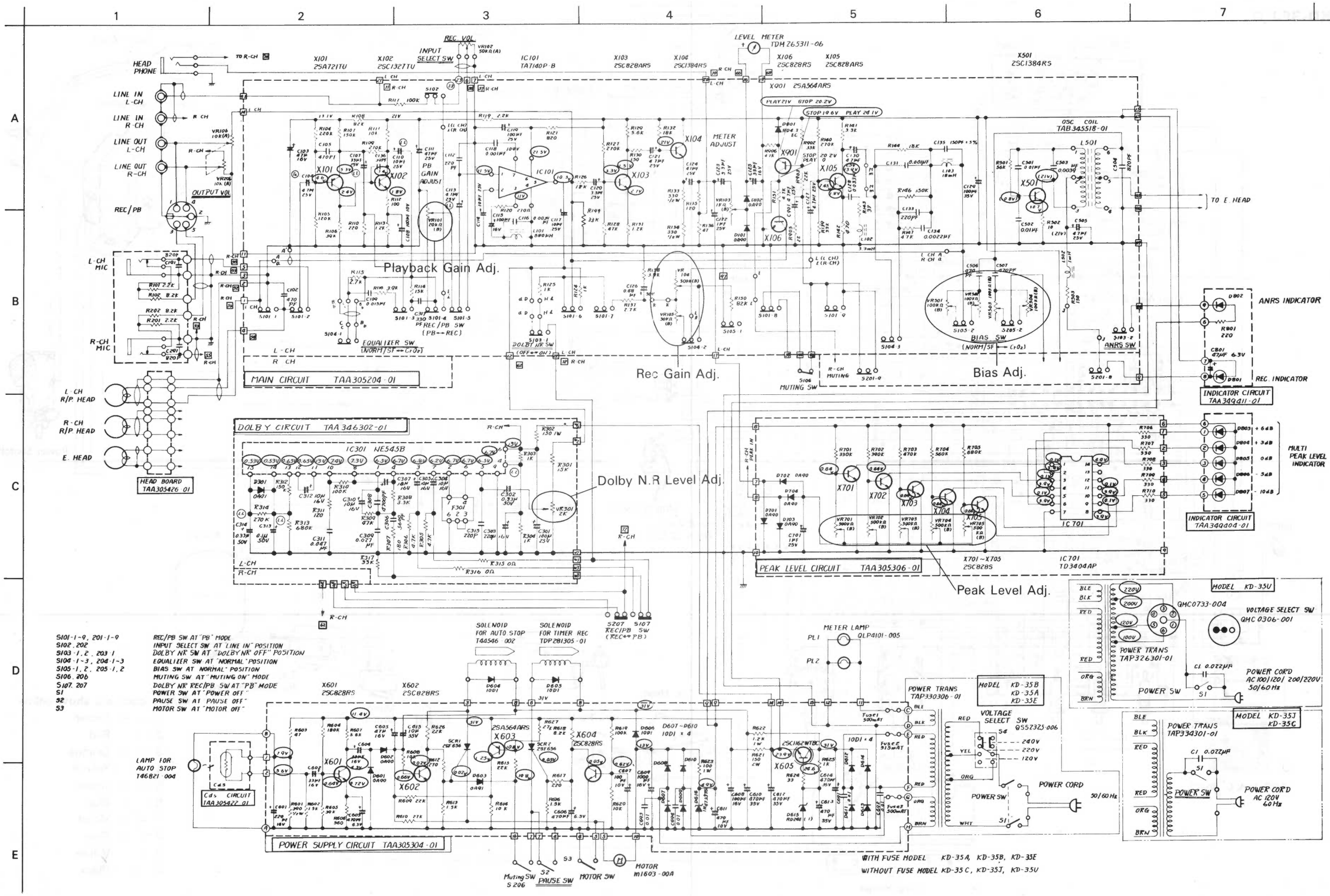
KD-35J/C



Colour code are show below.

1 ····· Brown
2 ····· Red
3 ····· Orange
4 ····· Yellow
5 ····· Green
6 ····· Blue
7 ····· Violet
8 ····· Grey
9 ····· White
0 ····· Black

Standard Schematic Diagram



S101-1-9, 201-1-9 REC/PB SW AT "PB" MODE
S102, 202 INPUT SELECT SW AT "LINE IN" POSITION
S103-1, 2, 203-1 DOLBY NR SW AT "DOLBY NR OFF" POSITION
S104-1-3, 204-1-3 EQUALIZER SW AT "NORMAL" POSITION
S105-1, 2, 205-1, 2 BIAS SW AT "NORMAL" POSITION
S106, 206 MUTING SW AT "MUTING ON" MODE
S107, 207 DOLBY NR REC/PB SW AT "PB" MODE
S1 POWER SW AT "POWER OFF"
S2 PAUSE SW AT "PAUSE OFF"
S3 MOTOR SW AT "MOTOR OFF"

[Variable resistors]

VR101,201	Playback gain adj.
VR102,202	REC volume
VR103,203	VU meter gain adj.
VR104,204	REC gain adj. (chrome)
VR105,205	" (normal)
VR301,401	DOLBY NR adj.
VR501	Left bias adj. (normal)
VR502	" (chrome)
VR503	Right bias adj. (normal)
VR504	" (chrome)
VR701,702,703, 704,705	Peak level adj.
VR901	Input level adj. (Lch only)

[Switches]

S101-1~9, 201-1~9	REC/PB switch (at "Playback" mode)
S102,202	Input select switch (at "LINE IN" mode)
S103-12,203-1	Dolby NR switch (at Dolby N.R. OFF" mode)
S104-1~3, 204-1~3	Equalizer switch (at "Normal" mode)
S105-1,2,205-1,2	Bias switch (at "Normal" mode)
S106,206	Muting switch (at "Muting on" mode)
S1	Power switch (at "OFF" mode)
S2	Pause switch (at "OFF" mode)
S3	Motor switch (at "OFF" mode)
S107, 207	Dolby NR REC/PB switch (at PB mode)

[Transistors]

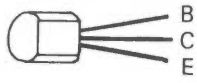
X101,201	2SA721TU	
X102,202	2SC1327TU	
X103,203	2SC828ARS	Main amp C. board
X105,205	2SC828ARS	
X106,206	2SC828RS	
X501	2SC828RAS	
X901	2SA564ARS	
X902	2SC828RAS	
X701~705	2SC828S	Peak level C. board
X601,602	2SC828RS	Power supply C. board
X603	2SA564ARS	
X604	2SC828RS	
X605	2SC1162WTBC	
SCR2 (X2)	2SF656	

[IC]

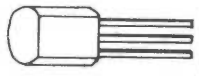
IC101,201	TA7140P-B	Main amp C. board
IC301, 401	NE545B	Dolby N.R. C. board
IC701	TD3404AP	Peak level C. board

[Diodes]

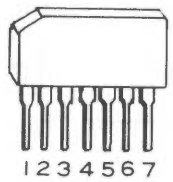
D101,102	OA90	Main amp C. board
D901	RD43EC	
D301, 401	0A91	Dolby N.R. C. board
D701,702,703, 704	OA90	Peak level C. board
D601,602	OA90	
D603	OA91	
D604,605,606, 607,608,609, 610,611,612, 613,614	10D1	Power supply C. board
D615	RD24E	
D616	1N4733T5	



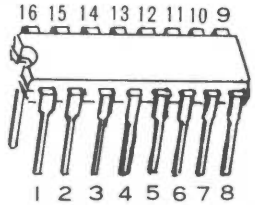
Transistor



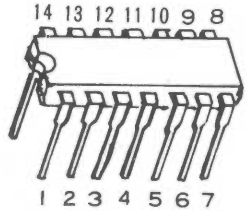
Thyristor 2SF656



IC TA140P-BC



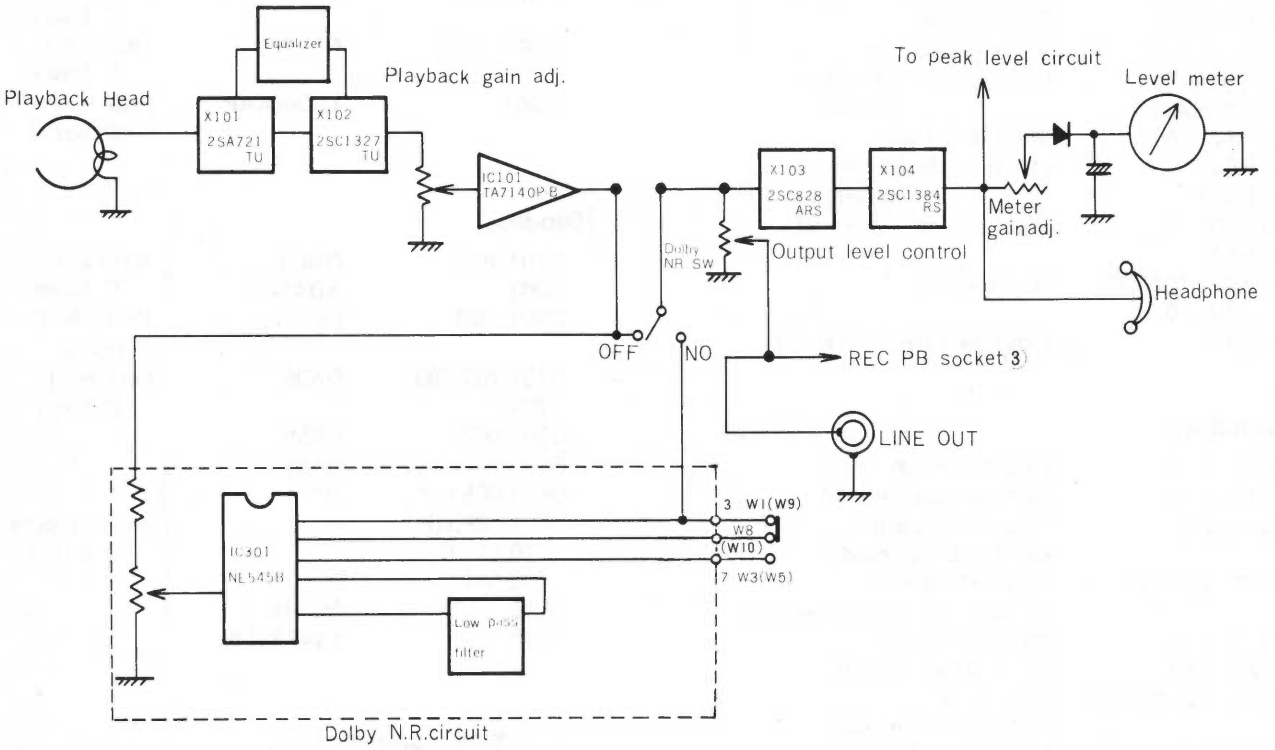
IC NE545B



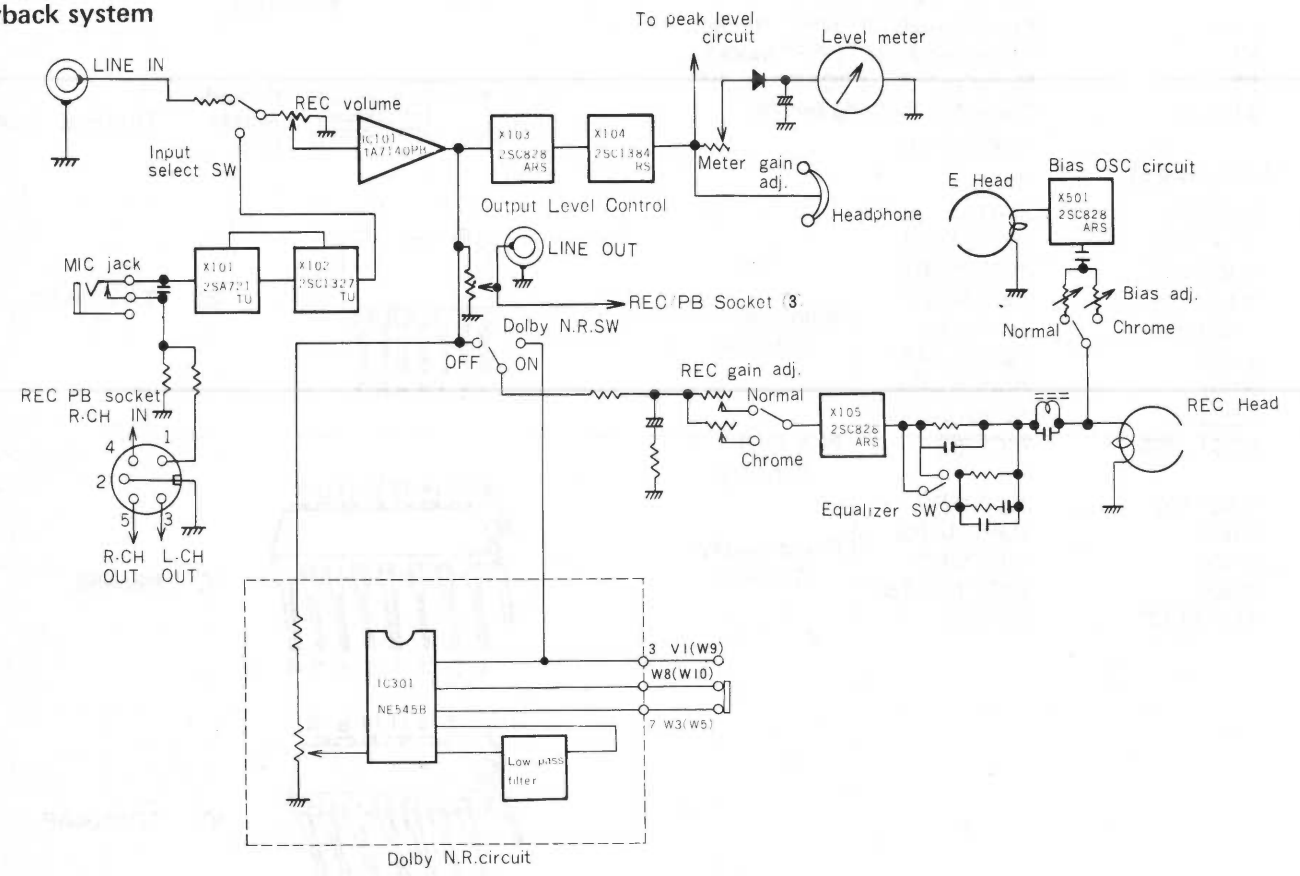
IC TD3404AP

Block Diagram

Recording system



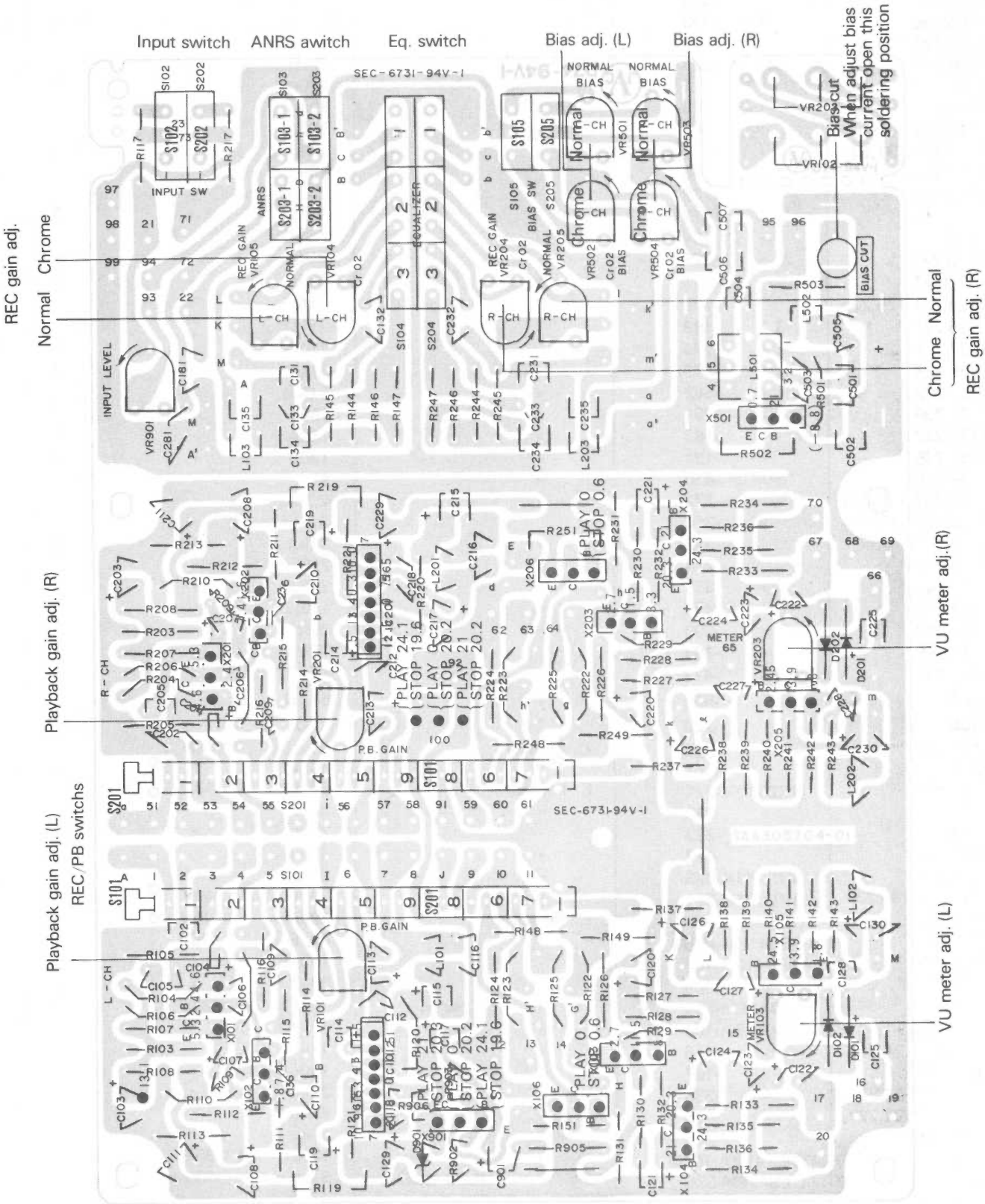
Playback system



Circuit Board Parts

Main Amp Circuit Board

Red print is shown the voltage (V) of playback mode.
( ) voltage ; at recording mode
When you measure the voltage by tester, we recommend you to use 20 kΩ/V impendance tester.



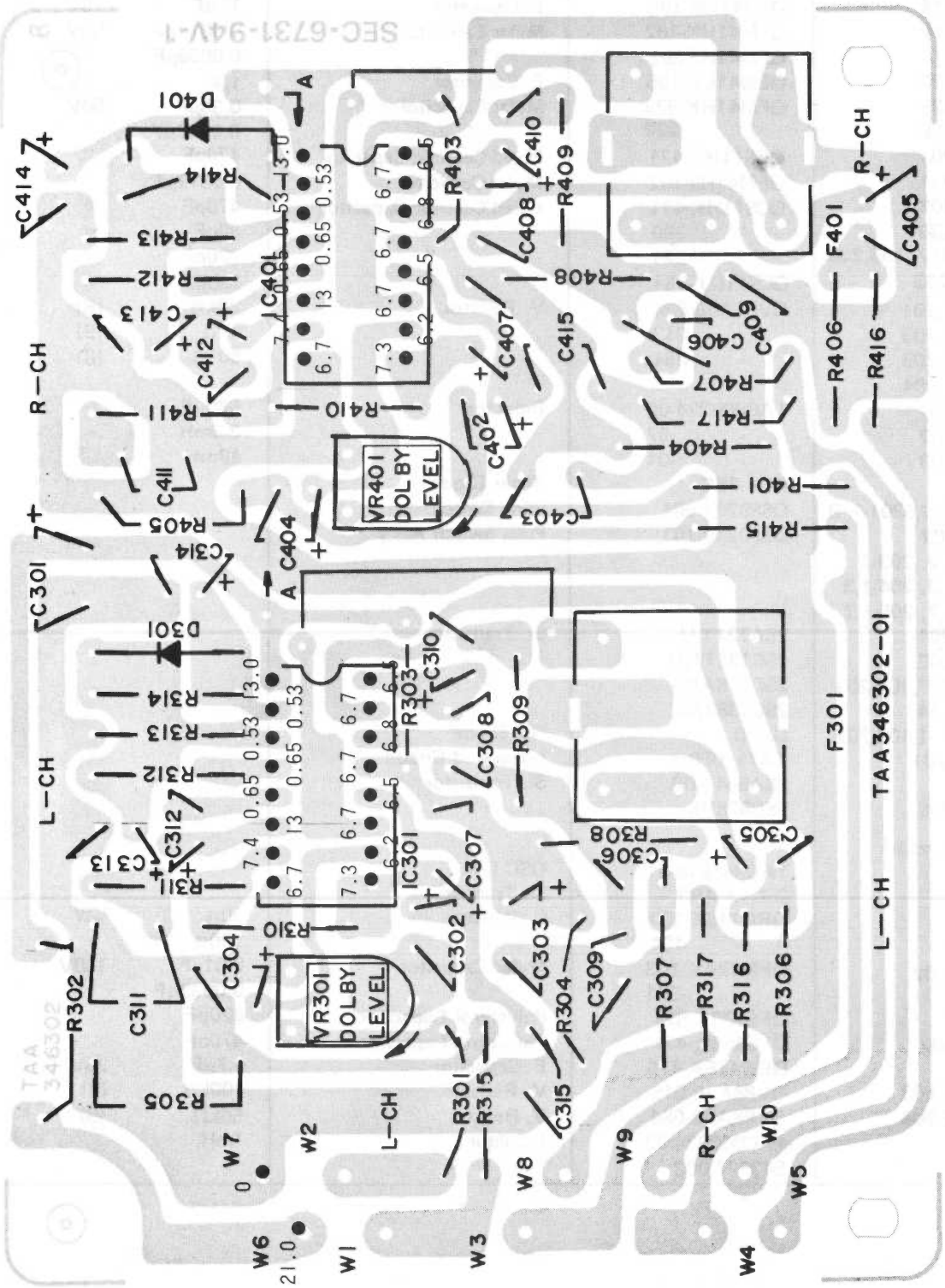
Main Amp Circuit Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	TAA305204-01	Circuit Board	for main amp	1
R104,204	QRD141K-224	C. Resistor	220kΩ ¼W	2
R105,205	" -124	"	120kΩ "	2
R106,206	" -393	"	39kΩ "	4
R107,207,146,246	" -154	"	150kΩ "	2
R108,208	" -823	"	82kΩ "	2
R110,210	" -221	"	220Ω "	2
R111,211	" -103	"	10kΩ "	2
R112,212	" -101	"	100Ω "	2
R113,213,131,231	" -122	"	1.2kΩ "	4
R114,214	" -153	"	15kΩ "	2
R119,219	" -222	"	2.2kΩ "	2
R151,251	" -472	"	4.7kΩ "	2
R117	" -104	"	100kΩ "	1
R120,220	" -221	"	220Ω "	2
R121,221	" -821	"	820Ω "	2
R124,224,125,225	" -102	"	1kΩ "	4
R126,226	" -183	"	18kΩ "	2
R127,227	" -274	"	270kΩ "	2
R128,228	" -473	"	47kΩ "	2
R129,229	" -562	"	5.6kΩ "	2
R130,230	" -151	"	150Ω "	2
R132,232	" -183	"	18kΩ "	2
R135,235	" -121	"	120Ω "	2
R136,236	" -470	"	47Ω "	2
R137,237,115,215	" -272	"	2.7kΩ "	4
R138,238,116,216	" -392	"	3.9kΩ "	4
R139, 239	" -333	"	33kΩ "	2
R140,240	" -274	"	270kΩ "	2
R141,241	" -332	"	3.3kΩ "	2
R142,242	" -471	"	470Ω "	2
R143,243	" -390	"	39Ω "	2
R144,244	" -183	"	18kΩ "	2
R147,247	" -473	"	47kΩ "	2
R501	" -563	"	56kΩ	1
R905	" -220	"	22Ω	1
R149,249	" -333	C. Resistor	33kΩ ¼W	2
R217	" -104	"	100kΩ "	1
R109,209	QRD143K-274	C. Resistor	270kΩ ¼W	2
R902	" -333	"	33kΩ "	1
R903	" -223	"	22kΩ "	1
R906	" -472	"	4.7kΩ "	1
R150,250	QRD141K-823	"	82kΩ "	2
R133,233,134,234	QRD121K-331	"	330Ω ½W	4
C108,208	QEW41AA-107	E. Capacitor	100μF 10V	2
C103,203	QEB41EM-476M	"	47μF 25V	2
C115,215	QEW41CA-107	"	100μF "	2
C125,225	" -336	"	33μF "	2
C110,210	QEB41EM-106	" (Low leak)	10μF 25V	2
C117,217	QEW41EA-106	"	10μF "	4
C111,211,124,224	" -476	"	47μF "	4
C119,219	" -107	"	100μF "	2
C120,220,123,223	" -335	"	3.3μF "	4
C121,221,127,227, 130,230,901	" -475	"	4.7μF "	7
C129,229	QEW41VA-107M	"	100μF 35V	2
C107,207	QEB41EM-336	" (Low leak)	33μF 25V	2
C113,213	" -475	"	4.7μF "	2

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
C137, 237	QCS11HK-331	Fixed Ceramic Capacitor	330pF 50V	2
C126,226	QEB41HM-684M	E. Capacitor	0.67μF 50V	2
C104,204	QEE41EM-475	Tantal E. Capacitor	4.7μF 25V	2
C109,209	QFM41HK-153	Mylar Capacitor	0.015μF 50V	2
C114,214	QEB41EM-106	E. Capacitor	10μF 25V	2
C118,218	QFM41HK-182	Mylar Capacitor	0.0018μF 50V	2
C116,216	QFM41HJ-392	"	0.0039μF "	2
C122,222	QEW41EA-105	E. Capacitor	1μF "	2
C128,228	QFM41HK-333	Mylar Capacitor	0.33μF 50V	2
C134, 234	" -222	"	0.0022μF "	2
C102,201	QCS11HK-471	Fixed Ceramic Capacitor	470pF "	2
C131,231	QFM41HJ-102	Mylar Capacitor	0.0012μF "	2
C105,205	QCS11HK-471	Fixed Ceramic Capacitor	470pF "	2
C136,236	" -390	"	39pF "	2
C112,212 ,133,233	" -221	"	220pF "	4
C135, 235	QCS11HJ-151	"	150pF "	2
VR101,201	QVP8A0B-024	V. Resistor	20kΩ (B)	2
VR103,203	" -013	"	1kΩ (B)	2
VR105,205, 104,204	" -054	"	50kΩ (B)	4
L101,201	TAC000324-06	Inductor	680μF	2
L102,202	" -07	"	3.3mH	2
L103,203	" -01	"	18mH	2
D901	RD4.3EC	Zener Diode		1
S101-1~9,S201-1~9	QSS9201-001	Slide Switch		2
S102,202	QSP0249-101	Push Switch Ass'y		1
S103-1,2, 203-1				
S104-1,3, 204-1,3				
S105-1,2, 205-1,2				
X101,201	2SA721T,U	Si. Transistor		2
X102,202	2SC1327T,U	"		2
X103,203,105,205	2SC828ARS	"		4
X104,204	2SC1384RS	"		2
D101,201,102,202	OA90	Ge. Diode		4
IC101,201	TA7140PB	Integrated Circuit		2
X901	2SA564ARS	Si. Transistor		1
X106,206	2SC828RS	"		2
(OSC Circuit)				
L501	TAC345518-01	OSC Coil		1
X501	2SC1384RS	Si. Transistor		1
R502	QRD146K-100	C. Resistor	10Ω ¼W	1
R503	" -151	"	150Ω "	1
C501, 502	QFM42AK-103	Mylar Capacitor	0.01μF 100V	2
C503	" -391	"	0.0039μF "	1
C504	QFS42BK-821	Polystyrol Capacitor	820pF	1
C506,507	QFS45BK-471	Polystyrol Capacitor	470pF	2
C505	QEW41EA-475	E. Capacitor	4.7μF 25V	1
VR501,503	QVP8A0B-015	V. Resistor	100kΩ (B)	2
VR502,504	QVP8A0B-054	V. Resistor	50kΩ (B)	2
L502	TAC000324-03	Inductor	1mH	1
	E43727-002	Tab		47

Dolby N. R Circuit Board

Red print is shown the voltage (V) of playback mode.
( ) voltage ; at recording mode
When you measure the voltage by tester, we recommend you to use 20 kΩ/V impendance tester.

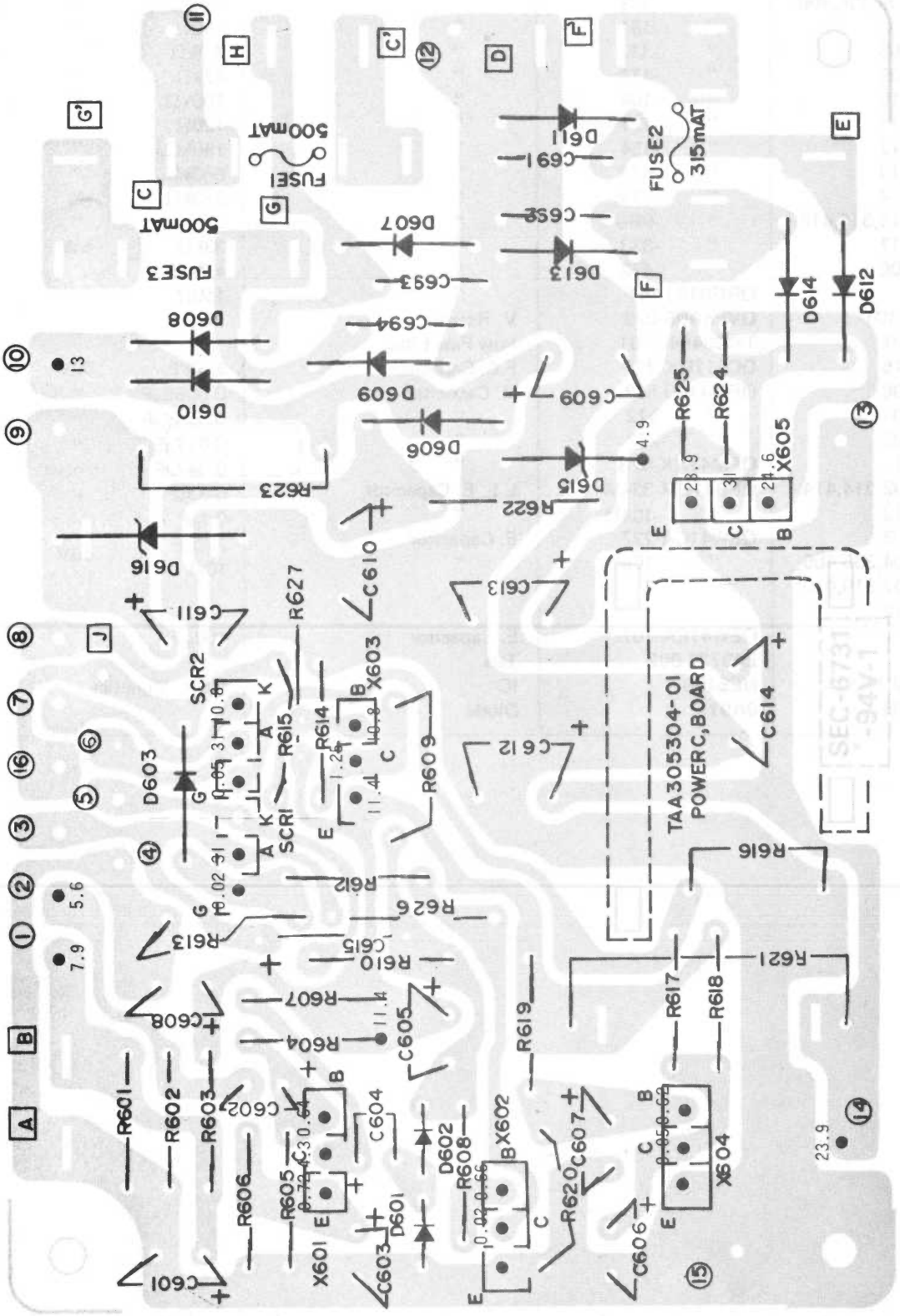


Dolby N.R. Circuit Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	TAA346302-01	Circuit Board	for Dolby	1
R301,401	QRD141K-153	C. Resistor	15kΩ ¼W	2
R303,304,403,404	" -102	"	1kΩ "	2
R305,405,306,406	" -472	"	4.7kΩ "	4
R307,407	" -181	"	180Ω "	2
R308,408	" -332	"	3.3kΩ "	2
R309,409	" -473	"	47kΩ "	2
R310,410	" -104	"	100kΩ "	2
R311,411	" -121	"	120Ω "	2
R312,412	" -154	"	150kΩ "	2
R313,413	" -684	"	680kΩ "	2
R314,414	" -274	"	270kΩ "	2
R315,415,316,416	" -0R0	"	0Ω "	4
R317,417	" -333	"	33kΩ ¼W	2
R306,406	" -472	"	4.7kΩ "	2
R302	QRG016J-151	"	150Ω	1
VR301,401	QVP8A0B-023	V. Resistor	2kΩ	2
F301,401	TAC346401-01	Low Pass Filter		2
C315,415	QCS11HK-221	F.C. Capacitor	220PF 50V	2
C306,406	QFM41HJ-562	M. Capacitor	0.0056μF "	2
C308,408	" -472	"	0.0047μF "	2
C309,409	" -273	"	0.027μF "	2
C311,411	QFM41HK-473	"	0.047μF "	2
C302,402,314,414	QEB41HM-334M	L.L. E. Capacitor	0.33μF "	4
C313,413	" -104M	"	0.1μF "	2
C303,403	QEW41CA-227	E. Capacitor	220μF 16V	2
C304,404,305,405, 307,407,310,410, 312,412	" -106	"	10μF "	10
C301	QEW41EA-107	E. Capacitor	100μF	1
	E43727-002	Tab		10
IC301,401	NE545B	IC	MER: Signetics	2
D301,401	0A91	Diode		2

Power Supply Circuit Board

Red print is shown the voltage (V) of playback mode.
( ) voltage ; at recording mode
When you measure the voltage by tester, we recommend you to use 20 kΩ/V impendance tester.

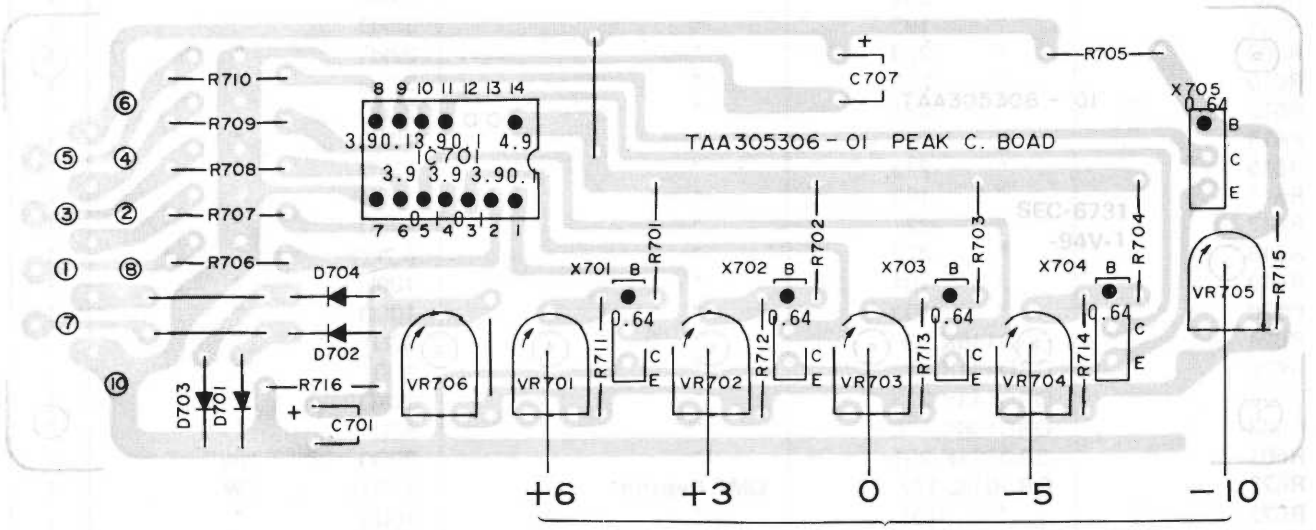


Power Supply Circuit Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	TAA-305304-01	Circuit Board	for Power Supply	1
R602,613	QRD142K-152	C. Resistor	1.5kΩ ¼W	2
R604	" -184	"	180kΩ "	1
R605	" -393	"	39kΩ "	1
R606	" -561	"	560Ω "	1
R607	" -562	"	5.6kΩ "	1
R608	" -103	"	10kΩ "	1
R609	" -223	"	22kΩ "	1
R610	" -273	"	27kΩ "	1
R612	" -271	"	270Ω "	1
R614	" -103	"	10kΩ "	1
R615	" -223	"	22kΩ "	1
R616	" -152	"	1.5kΩ "	1
R617	" -221	"	220Ω "	1
R618	" -822	"	8.2kΩ "	1
R619	" -104	"	100kΩ "	1
R620	" -103	"	10kΩ "	1
R624	QRD146K-330	"	33Ω "	1
R625	QRD141K-102	"	1kΩ "	1
R626	QRD143K-223	"	22kΩ "	1
R603	QRD146K-470	"	47Ω "	1
R601	QRD121K-391	"	390Ω ½W	1
R622	QRG016J-122	OMF Resistor	1.2kΩ 1W	1
R623	" -101	"	100Ω "	1
R621	QRG026J-151	"	150Ω 2W	1
R627	QRD143K-273	C. Resistor	27kΩ ¼W	1
C603,606	QEW40JA-477	E. Capacitor	470μF 6.3V	1
C607	QEW41AA-107	"	100μF 10V	1
C611	" -477	"	470μF "	1
C601	QEW41CA-227	"	220μF 16V	1
C602,604	" -336	"	33μF "	2
C605	" -476	"	47μF "	1
C608	" -107	"	100μF "	1
C609	" -108	"	1000μF "	1
C610,612,613,614	QEW41VA-477	"	470μF 35V	4
C615	QEW41VA-106	E. Capacitor	10μF "	1
C691,692,693,694	QCF12HP-103	Fixed Ceramic Capacitor	0.01μF 500V	4
	A43596-001	Tab		4
	E43727-002	"		15
	E40130-001	"		8
X601,602,604	2SC828RS	Si. Transistor		3
X603	2SA564ARS	"		1
X605	2SC1162WTBC	"		1
SCR1	2SF656	SCR		1
D615	RD24E(1)	Zener Diode		1
D616	1N4733T5	"		1
D601,602	OA90	Ge. Diode		2
D603	OA91	"		1
D606,607,608,609 610,611,612,613 614	T30155-001 or V06-B	Si. Diode		9
	TAR272448-01	Heat Sink		1
	LPSP3008ZS	Screw	for X605	1
	TAZ000331-02	Fuse Holder	(KD-35A/B/E)	6
F1	QMF51A2-R50	Fuse	500mAT (KD-35A/E)	1
F2	" -R315	"	315mAT (")	1
F3	" -R50	"	500mAT (")	1
	QMF51A2-R50LBS	Fuse	500mAT (KD-35B)	1
	" -R315LBS	"	315mAT (")	1
	" -R50LBS	"	500mAT (")	1

Peak Level Circuit Board

Red print is shown the voltage (V) of playback mode.
( ) voltage; at recording mode
When you measure the voltage by tester, we recommend you to use 20kΩ/V impedance tester.

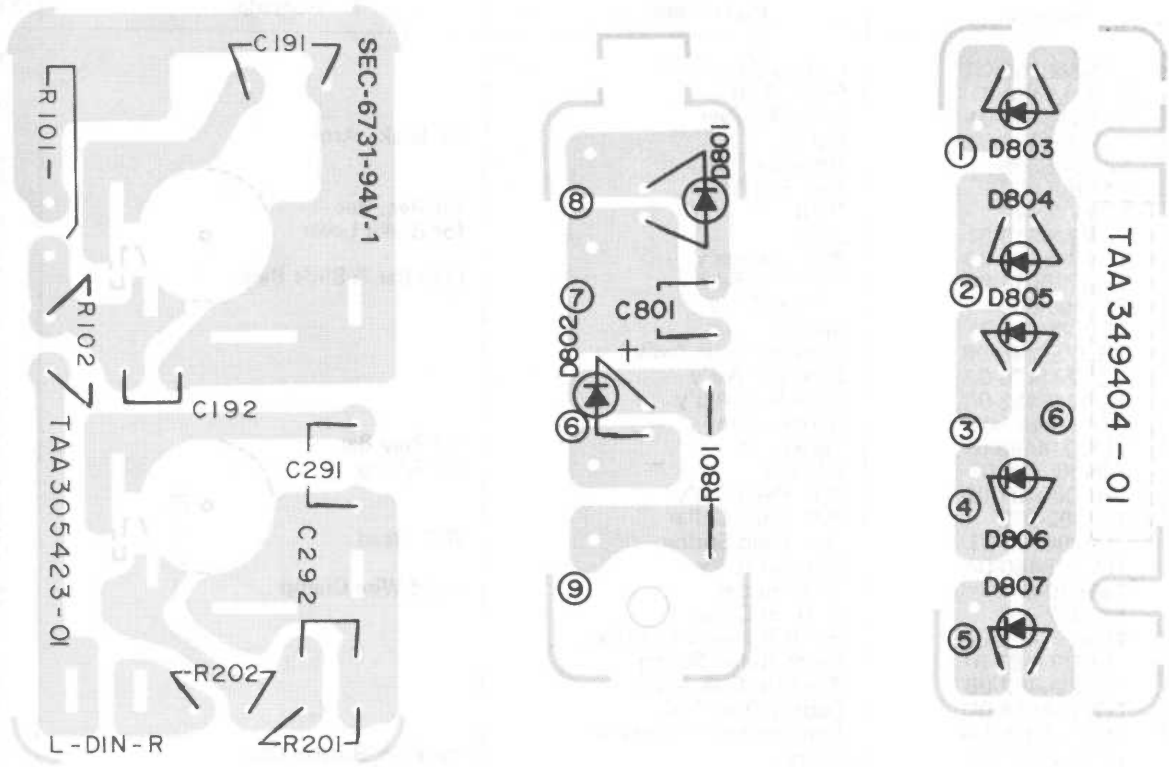


Peak level adj.

Peak Level Circuit Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	TAA305306-01	Circuit Board	for peak	1
R701	QRD142K-334	C. Resistor	330kΩ ¼W	1
R702	" -394	"	390kΩ "	1
R703	" -474	"	470kΩ "	1
R704	" -564	"	560kΩ "	1
R705	" -684	"	680kΩ "	1
R706,707,708,709, 710	" -331	"	330Ω "	5
C701	QEW41EA-105	E. Capacitor	1μF 25V	1
C707	QEW41AA-227	E. Capacitor	220μF	1
VR701,702,703, 704,705	QVP8A0B-055	V. Resistor	500kΩ (B)	5
D701,702,703,704	OA90	Ge. Diode		4
X701,702,703,704, 705	2SC828T	Si. Transistor		5
IC701	TD3404AP	Integrated Circuit		1
	E43727-002	Tab		9

Other Circuit Board



Other Circuit Board Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
(MIC Jack C. Board)				
	TAA305423-01	Circuit Board	for MIC jack	1
R101,201	QRD143K-222	C. Resistor	2.2kΩ ¼W	2
R102,202	" -472	"	4.7kΩ "	2
C191,291	QCY41HK-821	Fixed Ceramic Capacitor	820pF	2
	E40516-001	Tab		4
	TAJ305307-02	Jack Ass'y	for MIC & headphone	1 set
(Indicator C. Board)				
	TAA349404-01	C. Board	for Indicator	1
D801,803,804,805, 806,807	TLR102	LED		6
	TER305427-01	Spacer		5
	TAA349411-01	C. Board	for Indicator	1
D802	TLG102	LED		1
	TER305427-01	Spacer		2
R801	QRD146K-221	C. Resistor	220Ω ¼W	1
C801	QEW40JA-476	E. Capacitor		1
(Other C. Board)				
	TAA305426-01	Circuit Board	for headwire terminal	1
	TAA305422-01	Circuit Board	for CdS	1
	T45616-001	CdS Photo-cell		1

Mechanical Component List

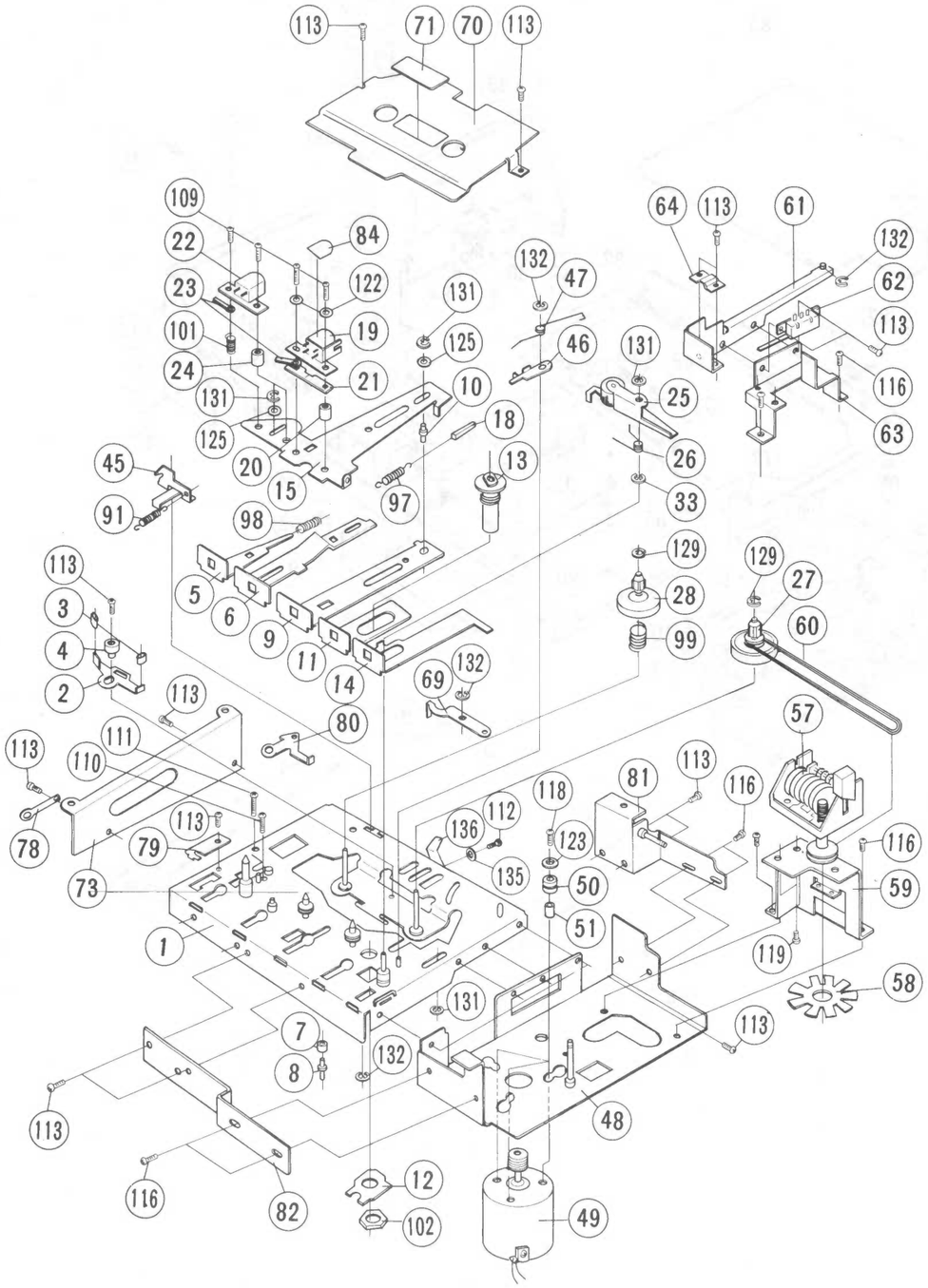
Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	TGB305205-0A	Chassis Base Ass'y		1
2	TFB265488-01	Brake Arm		1
3	TER265487-01	Brake Rubber		2
4	TFH265486-01	Collar	for Brake Arm	1
5	T47449-00B	Rew. Bar Ass'y		1
6	T47453-00C	Rec. Bar Ass'y		1
7	T30302-049	Collar	for Rec. Bar	1
8	TFH265516-01	Stud	for Brake Lever	1
9	TGB265485-0B	Play Bar Ass'y		1
10	TFH265514-01	Pin (Play Bar)	Play Bar & Slide Base	1
11	T47459-00B	FF Bar Ass'y		1
12	TFB305417-01	Spacer		1
13	TGH265546-0B	Capstan Metal Ass'y		1
14	TGB291420-0A	Stop Bar Ass'y		1
15	TGB265482-0C	Slide Base Ass'y		1
16	TFP014497-01	Spring Plate		1
17	TFW014498-01	Spring	for Play Bar	1
18	TJN265559-01	Silencer	for Spring	1
19	THC000487-0B	R.P. Head Ass'y		1
20	T30302-072	R.P. Head Collar		1
21	TFP294513-01	R.P. Head Spring	R.P. Head	1
22	THS265480-0A	E. Head Ass'y		1
23	T45640-001	Wire Holder	Head Wire Clamp	2
24	T30302-067	E. Head Collar		1
25	TGB291415-0A	Pinch Roller Arm Ass'y		1
26	TFW294483-01	Pinch Roller Spring		1
27	TGP294462-0B	Take Up Disk Ass'y		1
28	TGP294464-0D	Supply Disk Ass'y		1
29	TGB265475-0A	Push Button Cam Ass'y		1
30	TFB265509-02	Stopper	for Push Button Cam	1
31	QSMIS01-015	Micro SW Ass'y		1
32	T47528-002	SW Lever		1
33	TGX294488-0A	FF Arm Ass'y		1
34	T47507-001	FF Spring		1
35	TFH265557-01	Metal	FF Arm	1
36	T47508-00A	Rew. Arm Ass'y		1
37	T47500-001	Idler Ass'y		1
38	TFH265534-01	Metal	for Rew. Arm	1
*39	TFB294478-02	Review Lever		1
40	T47529-001	Metal	for Review Lever	1
41	TGB265472-0A	Brake Lever Ass'y		1
42	TGP265471-0C	Take Up Lever Ass'y		1
43	T47520-001	Lever Spring		1
44	TGP265571-0A	Idler Pulley Ass'y		1
45	TFB291414-01	Rec. Safety Lever		1
46	TFB265535-01	Select Lever	for Stop Eject	1
47	TFW305443-01	Select Lever Spring	"	1
48	TGB305404-0A	Motor Bracket Ass'y		1
49	m1603-00A	Motor Ass'y		1
50	53492	Rubber Bushing		3
51	T30302-058	Collar	for Motor	3
52	TGD305446-0A	Flywheel Ass'y		1
53	TEB265499-02	Capstan Belt		1
54	TFB265492-01	Flywheel Holder		1
55	TEP265498-01	Thrust Washer		1
56	TEB265497-01	Take Up Belt		1
57	TGW305303-0A	Counter Ass'y		1
58	TFB265495-02	Plate		1
59	TFB305406-01	Counter Bracket		1
60	TEB305407-01	Counter Belt		1
61	TGB305409-0B	Pause Bar Ass'y		1
62	QSP1210-011	Push SW Ass'y	for Pause	1
63	TFB305408-01	Pause SW Bracket		1
64	TFB305411-01	Bracket	for Pause Bar	1
65	TDP281305-02	DC Solenoid		1
66	TFH281422-01	Pin		1
67	TFB305412-01	Pause Arm		1
68	TFW305413-01	Wire		1
69	TFB265543-02	Pause Lever		1
70	TFB291411-02	Cassette Holder		1

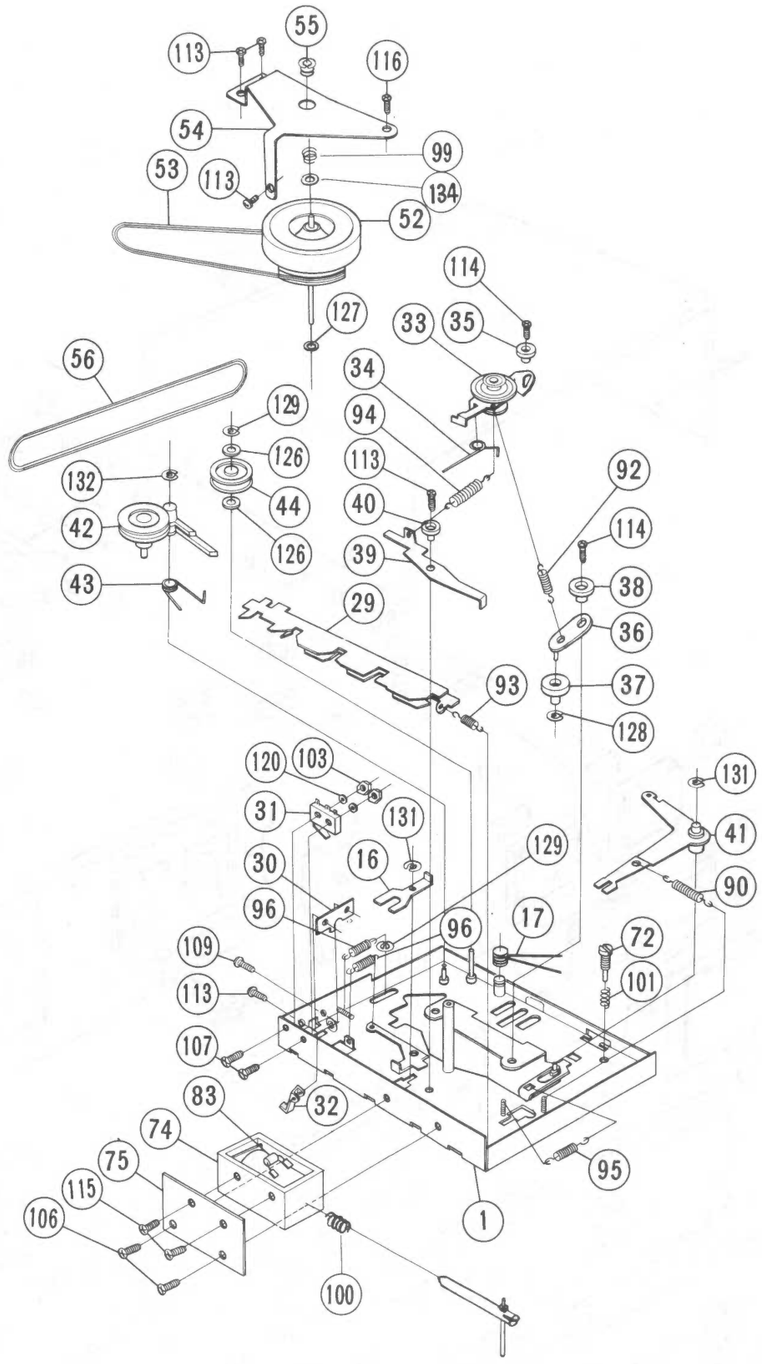
Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
71	TJP305451-01	Reflection Plate		1
72	TFH305442-01	Special Screw		1
73	*TGB349409-0A	Holder Bracket (L) Ass'y		1
74	TDP294319-0A	DC Solenoid		1
75	TFB265458-03	Solenoid Bracket		1
79	TFB265456-01	Guide Plate		1
80	TFB265550-02	Rec. Lock Lever		1
81	TGB305430-0A	Holder Bracket Ass'y		1
82	TFB305429-01	Bracket		1
83	T30155-001 or V06-B	Si. Diode		2
84	THC037417-01	Head Plate		1
89	T30300-153	Spring		1
90	" -140	"	Brake Lever	1
91	" -121	"	Lock Lever	1
92	" -126	"	Idler	1
93	" -132	"	Button Cam	1
94	" -151	"	Idler	1
95	" -136	"	Rec. Bar	1
96	" -137	"	FF Bar, Stop Bar	2
97	" -139	"	Play Bar – Slide Bar	1
98	T30301-122	"	Rew. Bar	1
99	T30301-103	"	Back Tension, Flywheel	2
100	" -106	"		1
101	" -115	"	E. Head, Special Screw	2
102	T47828-001	Nut	M8 x 0.75	1
103	NNS2000N	"	Micro SW	2
105	NTB3000S	Nut	Solenoid	1
106	SSSP2604Z	Screw	Bracket	2
107	SSSP2012Z	"	Micro SW	2
109	SPSP2008Z	Screw	Rec./PB Head, E Head, Stoper	5
110	SPSP2010Z	"	Rec. Spring	1
111	SPSP2012Z	"	Spring	1
112	SPSP2604Z	"	Spring Plate	1
113	LPSP2005Z	"	Brake Arm, Cassette Holder, Stoper Rew. Arm, Review Lever, Pause Bar, Holder Bracket, Motor Bracket, Holder Bracket	19
114	LPSP2006Z	"	FF Arm, Holder	4
115	LPSP2604Z	"	Solenoid, Guide Plate, Counter Bracket,	3
116	LPSP2605Z	"	DC Solenoid, Switch Bracket, Motor Bracket	10
118	LPSP2608Z	Screw	Motor	3
119	LPSP3005ZS	"	Counter	2
120	WLS2000	Washer	Micro Switch	2
121	WLS3000	"	Solenoid	1
122	WNS2000N	"	Rec./PB Head	2
123	Q03091-154	"	Motor	3
124	WNB2600N	"	Solenoid	2
125	Q03093-430	"	Slide Base	2
126	Q03093-610	"	Idler Pulley	2
127	Q03093-611	"	Flywheel	2
128	REE1000	"E" Ring	Idler	1
129	REE1200	"	Disc Ass'y, Switch Lever, Idler Pulley	4
130	REE1500	"	Pin	1
131	REE2000	"	Playback Bar, Slide Base, Pinch Roller, Brake Lever, Pause Arm	8
132	REE2500	"	Pause Bar – Pause Lever, Stop bar, Take Up Lever, Stop/Eject	6
133	REE4000	"		1
134	Q03093-405	Washer	Flywheel	1
135	WNS2600N	"	Spring Plate	1
136	TFP305464-01	Spring Plate		1

Enclosure Ass'y and Electrical Parts List except Circuit Board Parts

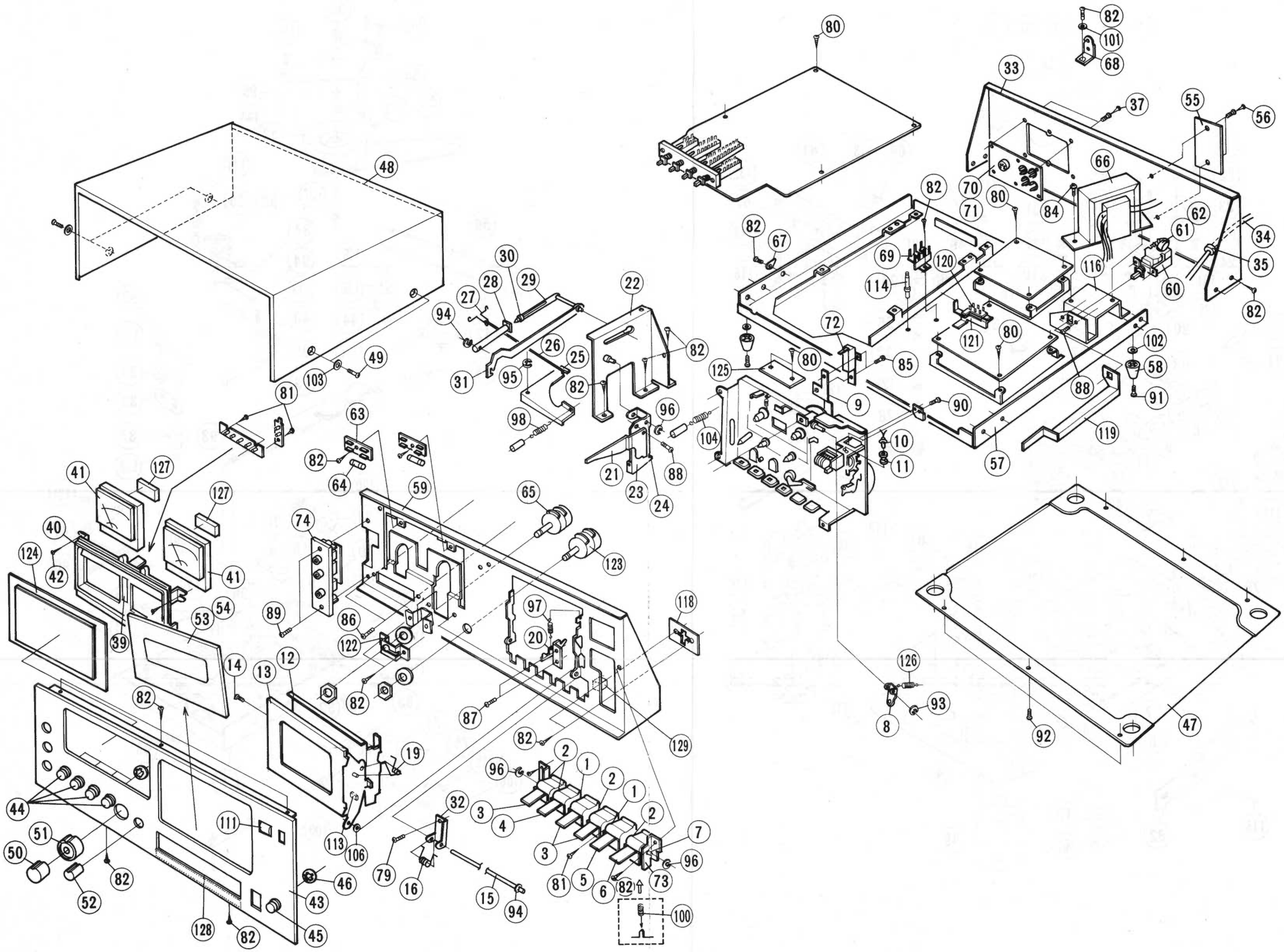
Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	TED349401-01	Bottom Holder		2
2	TFB349413-01	Push Button Spacer		4
3	TJB349303-01	Push Button		3
4	TJB349303-02	"	for REC	1
5	TJB349303-03	"	for STOP/EJECT	1
6	TJB349304-01	"	for PAUSE	1
7	TFH349402-01	Push Button Shaft		1
8	TGB291485-0A	Bracket Ass'y		1
9	TFB265436-01	Switch Bracket	for Muting Switch	1
10	T46821-002	Pilot Lamp		1
11	53492	Rubber Bushing		1
12	TGB291423-0A	Cassette Holder Ass'y		1 set
13	TGB291322-0C	Cassette Door Holder Ass'y		1 set
14	SSSP3008RS	Set Screw	for Cassette Holder	1
15	TFH305445-01	Shaft		1
16	TFW305435-01	Spring		1
17	TJN265423-05	Panel Cushion		2
18	TER291412-01	Rubber Cushion		2
19	TFW305458-01	Spring		1
20	TGB330415-0A	Lock Arm Ass'y		1 set
21	TFB305454-01	REC Arm (3)		1
22	TGB305416-0B	REC Bracket Ass'y		1 set
23	TFB305453-01	REC Arm (2)		1
24	T44341-001	Rubber Tire		1
25	TFB305414-02	REC Arm (1)		1
26	TFW305419-01	Rod		1
27	T47946-001	REC Rod		1
28	TEP267495-0B	Brake Pipe Ass'y		1 set
29	TEP267490-03	Brake Shaft		1
30	TER267508-02	O-Ring		1
31	TGB305457-0A	Brake Arm Ass'y		1 set
32	TFB305464-01	Spring Bracket		1
33	TFB305103-01	Rear Bracket	KD-35C/J/U	1
	" -02	"	KD-35A/B/E	1
34	QMP1600-244	Power Cord with Plug	KD-35C/J	1
	QMP2500-200	"	KD-35A, SAA-Core	1
	QMP9017-007	"	KD-35B, BS2-Core	1
	QMP3900-183	"	KD-35E	1
	QMP7600-183	"	KD-35U	1
35	QHS3876-162	Cord Stopper		1
36	E61206-001	Spacer	KD-35C	1
37	E48729-001	Plastic Rivet	for Jack Ass'y	6
38	FG9060-001	Connector	for Power Cord	2
39	TJP349405-01	Escutcheon Plate		1
40	TJE349201-01	Meter Escutcheon		1
41	T31058-04	Level Meter		2
42	E49447-003	Shaft	for Eschutcheon	2
43	TJP356101-01	Front Plate		1
44	TJB349305-0A	Push SW Button Ass'y		4
45	TJB342206-0B	"	for Power SW	1
46	RDS12000Z	C. S. Ring		5
47	TJC318101-01	Bottom Cover		1
48	TJC305105-01	Steel Cover		1
49	E60942-001	Special Screw		4
50	TJK349406-0A	Volume Knob (A) Ass'y		1
51	TJK349407-0A	" (B) "		1
52	TXKP016-3001	Volume Knob Ass'y		1
53	TJP291327-0B	Cassette Door Ass'y		1 set
54	TJP305309-04	Cassette Door Plate		1
55	TJL000342-24	Name Plate	KD-35J	1
	TJL000342-20	"	KD-35A	1
	TJL000342-21	"	KD-35B	1
	TJL000342-22	"	KD-35C	1
	TJL000352-04	"	KD-35E	1
	TJL000342-23	"	KD-35U	1
56	E48729-002	Plastic Rivet		2
57	TFC305102-04	Amp Chassis		1 set
58	E47227-005	Foot		4
59	TFB349102-01	Front Bracket		1
60	QSP1110-222	Push Switch	S1 for Power KD-35J/C	1

Mechanical Components





Enclosure Assembly and Electrical Parts Except Circuit Board Parts



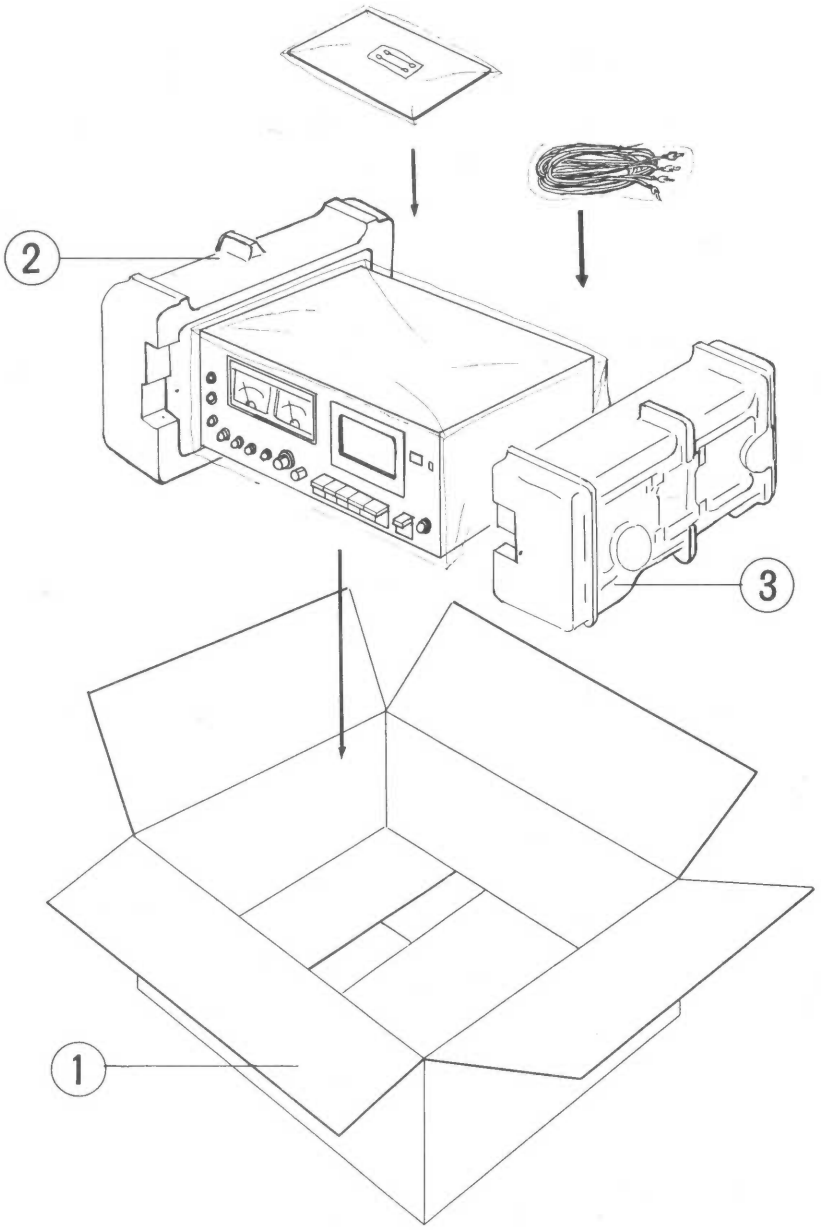
Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	QSP2111-011BS	Push Switch	S1 for power KD-35B	1
	QSP2111-011	Push Switch	S1 for Power KD-35A/E	1
	QSP1110-221	"	" KD-35U	1
61	QFH43AM-223	M. M. Capacitor	C1 KD-35J/C	1
62	T47047-001	Condenser Cap.	" "	2
63	QMG1121-003	Lamp Holder		2
64	QLP4101-005	Pilot Lamp	PL1, 2	1 set
65	QVL2A3A-054V	V. Resistor	VR102, 202, 50 kΩA	1
66	TAP334301-01	Power Transformer	KD-35J/C	1
	TAP330306-01BS	"	KD-35A/B	1
	TAP330306-01	"	KD-35E	2
	TAP326301-01	"	KD-35U	2
67	51739-002	Lug		1
68	TAW272462-01	"		1
69	E46651-001	Wrapping Terminal		1
70	TAJ271307-02	Jack Ass'y	for PIN & DIN Jack	1
71	TAA305459-01	Circuit Board	for Jack Ass'y	1
72	T30483-00C	Slide Switch	S106, 206 for Muting	1
73	TFB349302-01	Buttom Frame		1
74	TAJ305307-02	MIC Jack Ass'y		1
75	QSS2325-006	Slide Switch	for Voltage Select SW KD-35E/A	1
	QSS2325-006BS	Slide Switch	" KD-35B	1
76	TFB320401-01	Bracket	KD-35U	1
77	QMC0306-001	Plug Ass'y	KD-35U	1
78	QMC0733-004	Jack Ass'y	KD-35U	1
79	LPSP3008Z	Screw	for Voltage Select SW. KD-35U	2
80	SBSB3006Z	"	for Circuit Board (Main, Peak Level, Dolby NR Power Supply)	16
81	SBSB2606Z	Tapping Screw	for Indicator C. Board	2
82	SBSB3006Z	"	for Push Button, Bracket, RFC Bracket Ass'y, Front Panel, Rear Bracket, Lamp Holder, Front Bracket, Wrapping Terminal	27
83	DPSP3006ZS	Screw	for Spring Bracket	1
84	DPSP4006ZS	"	for Power Transformer	2
85	LPSP2004Z	"	for Muting Switch	2
86	LPSP2604Z	"	for Switch Bracket, BKT	5
87	LPSP2606Z	"	for Lock Arm Ass'y	3
88	LPSP3006ZS	"	for Power Switch, Push SW	4
89	LPSP3016ZS	"	for Jack Ass'y	2
90	SPSP2005Z	"	for CdS Circuit Board	2
91	SPSP3016ZS	"	for Foot	4
92	SDBP3008NS	"	for Bottom Cover	6
93	REE2000	E-Ring	for Bracket, Brake Pipe Ass'y, Brake Shaft, Brake Arm	4
94	REE2500	"	for Shaft	2
95	REE3000	"	for REC Arm (1)	1
96	REE4000	"	for Push Button Arm, REC Arm (2)	3
97	T30300-125	Spring	for Lock Arm Ass'y	1
98	" -152	"	for REC Arm (1)	1
100	T30301-105	"	for Push Button	6
101	WNB3000N	Washer	for Bottom Cover, Lug	7
102	WSS3000B	"	for Foot	4
104	T30300-134	Spring		1
105	T30300-124	"		1
106	TFB305461-01	Washer		2
107	WLS4000	"		1
111	TJE349408-02	Counter Lens		1
112	T42483-004	FT Screw		4
113	TJN271501-07	Himelon Sheet		2
114	TFH305462-01	Stud		1
115	T43595-006	Double Face		8
116	TFB356301-01	Trans. Bracket		1
117	LPSP4006ZS	Screw		2
118	TFB356401-01	Bracket		1
119	TFB356402-01	Bar		1
120	T30483-00D	Slide SW	for Dolby	1
121	TFB356403-01	SW Bracket		1
122	TFB349403-01	Volume Bracket		1
123	QVD2A3A-014V	V. Resistor		1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
124	TJE349301-01	Finder		1
125	TAA305426-01	Circuit Board		1
126	T30300-157	Spring	for Bracket	1
127	TJN000354-05	Cushion	for Meter	2
128	TJN000345-27	Cushion	for Front Panel	1
129	TJN265423-02	Cushion	for Front Bracket	1

Accessories

Parts No.	Parts Name	Remarks	Q'ty
CN-201	DIN Cord Ass'y	KD-35B/E	1
T30046-00B	Pin Cord Ass'y	KD-35A/U/J/C	2
T47796-00B	Head Cleaning Stick		2
AP4056A-024	Envelope	for H. C. Stick	1
TLT000429-01	Caution Card	"	1
TLT305452-02	"	"	1
TLT000448-01	Caution Label	KD-35J/C UL Caution	1
TLT052401-01	Warning Label	KD-35A/E	1
TLT052401-01BS	Warming Label	KD-35B	1
TLT279401-01	Caution Label	KD-35E	1
T46965-002	Demo. Cassette		1
T7676EGF	Instruction Book		1
TLT000443-01BS	Seal	KD-35B for Front Panel	1
QZL1002-003BS	Warning Label	KD-35B for Power Cord	1
TLT000462-02BS	B. S. Caution	KD-35B for Inst. Book	1
T46328-001	Caution Label	KD-35U	1
T46328-004	"	KD-35E	1
T46328-003	"	KD-35B	1
BT20013	Guarantee Certificate	KD-35B	1
TLZ000348-02	Tape Select Chart		1
T47099-001	Warning Card	KD-35J/C	2
BT20022B	Warranty Card	KD-35J/C	1
BT20023	Service Procedure	KD-35J	1
BT20024	Special Reply Card	KD-35J	1
T44362-001	CSA Marker	KD-35C	1
TLT356404-01	Dolby Label		1

Packing



PACKING MATERIAL LIST

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1–	*TKB349306-0C	Packing Case Ass'y	KD-35B/E/J/U	1 set
1	*TKB349306-05	Case	KD-35B/E/J/U	1
2	TKC305107-01	Cushion (L)		1
3	TKC305108-01	" (R)		1
	TKS000501-01	Sheet	for set	1
	QPGA055-06005	Envelope	"	1
	AP4056A-036	"	for Power Cord	2
	AP4056A-077	"	for Instruction Book	1

JVC

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